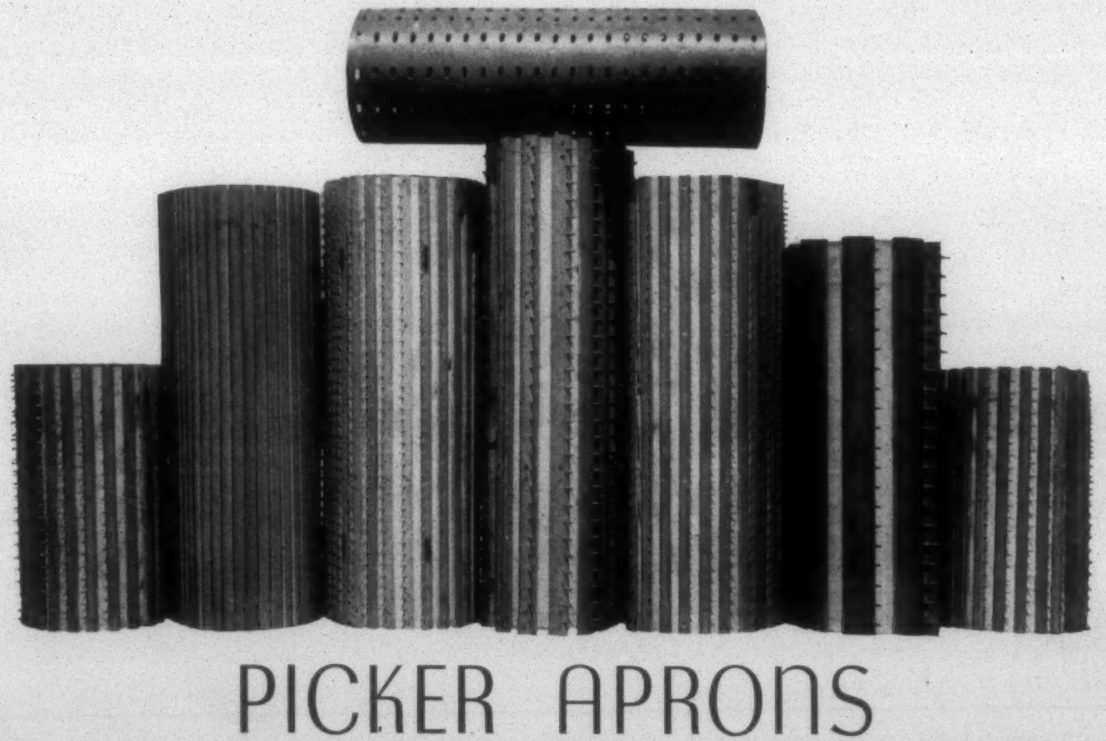
TEXTILE BULLETIN

VOL. 66 AUGUST 15, 1944 NO. 12

Thorough Cleaning OF THE COTTON IS THE FIRST STEP TOWARD GOOD YARN



PICKER APRONS

Are An Important Part of Preparatory Machinery

It pays, therefore, to equip your pickers with aprons that are made of QUALITY MATERIALS by experienced workman . . . made STURDY and STRONG to stand the gaff of today's high speed production demands

OUR TEXTILE APRONS MEET THOSE SPECIFICATIONS

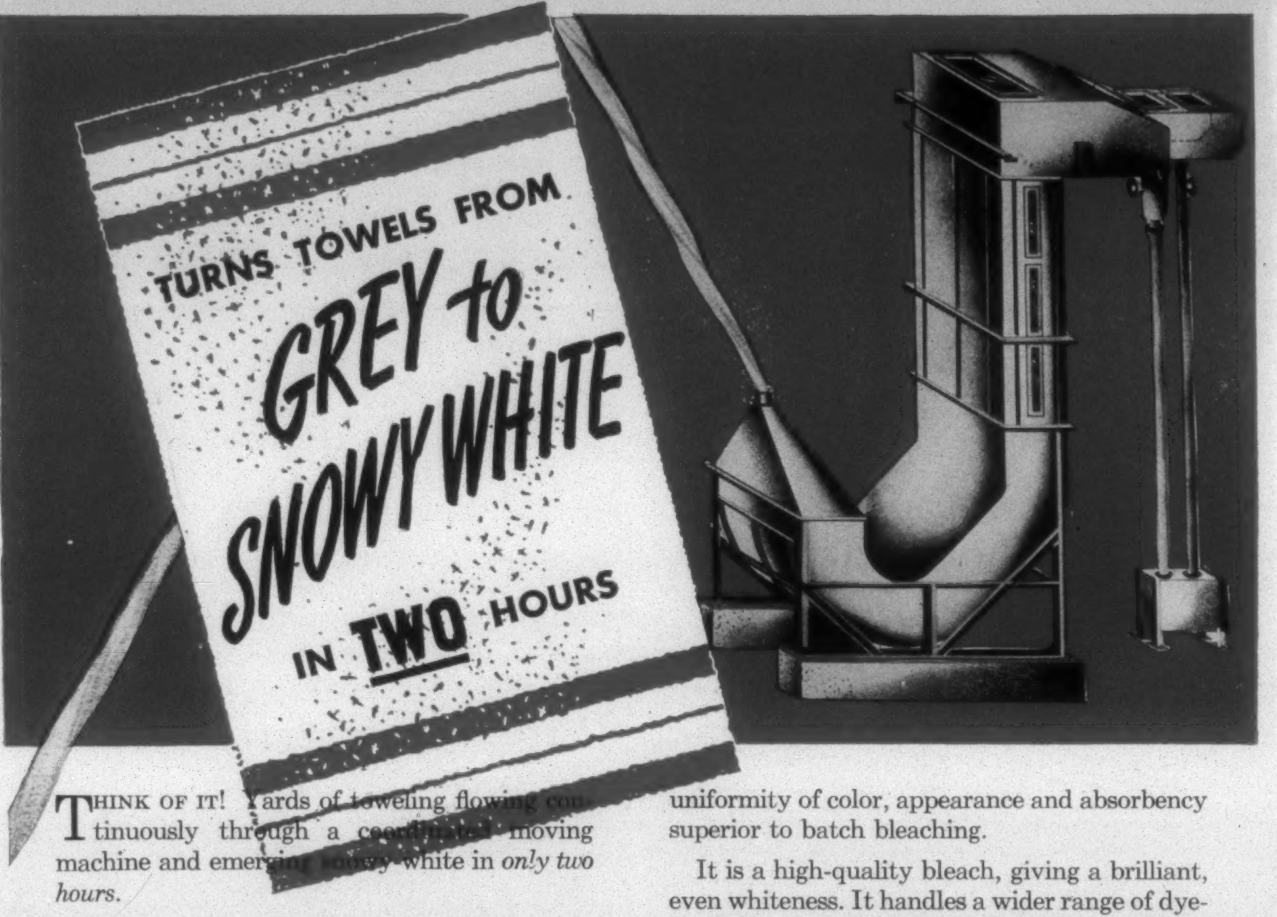
QUICK DELIVERY—APRONS FOR STANDARD MACHINES IN STOCK

TROY WHITEHEAD MACHINERY COMPANY

Phone 3-9831 CHARLOTTE, N. C. P. O. Box 1694

INSTITUTE FOR RESEARCH IN
SOCIAL SCIENCE AUG 44
CHAPEL HILL N C 2529
BOX 539 G

DU PONT *CONTINUOUS* PEROXIDE BLEACH



THINK OF IT! Yards of toweling flowing continuously through a coordinated moving machine and emerging snowy-white in *only two hours.*

This is a far cry from batch bleaching, with its time-lag of from eight to fourteen hours. Now, continuous bleaching becomes an integral part of the production line.

This process is the result of intensive research and development by Du Pont engineers. Successful operation at a number of leading mills has now proved it practical.

Besides saving time, Du Pont Continuous Peroxide Bleach saves in other ways . . . on steam, water, chemicals. The savings justify the investment required.

When changing from one fabric to another, only a simple adjustment is necessary. As material goes through the process, each yard is treated alike from start to finish. The result is a uniformity of color, appearance and absorbency superior to batch bleaching.

It is a high-quality bleach, giving a brilliant, even whiteness. It handles a wider range of dyestuffs successfully, eliminates many common imperfections, and reduces seconds and rejects to a minimum. The reason for this is the fact that all operations are easily controlled.

The necessary equipment—designed and patented by Du Pont—is built by recognized manufacturers of textile finishing machinery. For information on the use of peroxides in continuous bleaching, write E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Dept., Wilmington, Delaware.

✓ THESE FEATURES

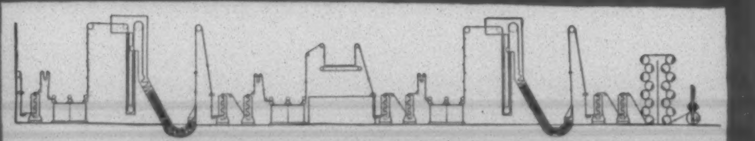
TWO-HOUR BLEACH	**HIGH QUALITY**
ECONOMICAL	**UNIFORM BLEACH**
FLEXIBLE	**CONTROLLED**

MINIMUM SECONDS AND REJECTS

DU PONT

DU PONT PEROXIDES

Better Things for Better Living . . . Through Chemistry



Flow plan of a typical Du Pont continuous unit

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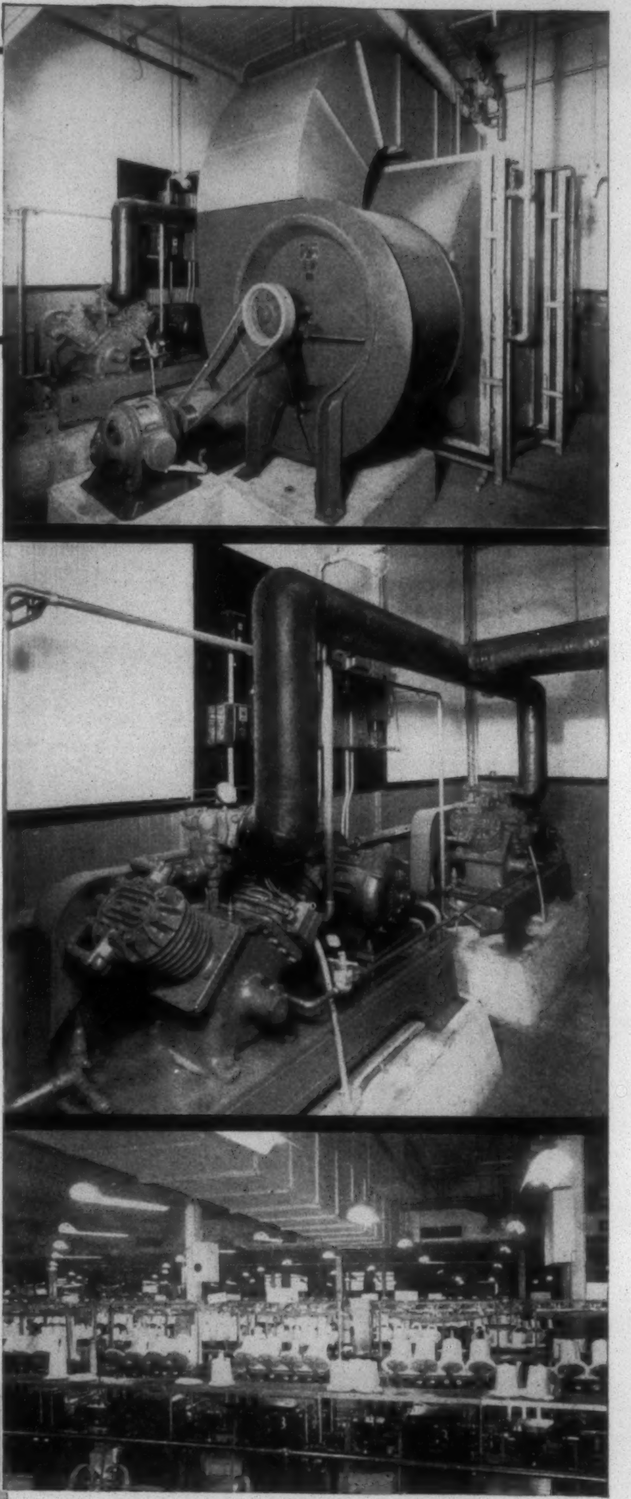
YEAR 'ROUND TEMPERATURE CONTROL

Bahnson experience, equipment, and engineering solved a difficult situation in this Rayon weaving mill where outside humidity was a problem, and space, ceiling clearances, and obstructions presented more than an average problem.

Dehumidifying by refrigeration with year around temperature control was the solution worked out for this difficult situation. Bahnson experience and equipment, plus engineering skill in meeting varying conditions throughout the textile industry, resulted here in a thoroughly practical, compact and efficient installation.

Bahnson equipment, in the hands of experienced air conditioning engineers, is now ready to bring postwar solution to any air conditioning problem—whether it concerns worker comfort, operating efficiency or both.



This 35,000 C. F. M. Unit with forty-five tons refrigeration capacity has been neatly engineered for installation in a 12' x 12' corner of a supply room.

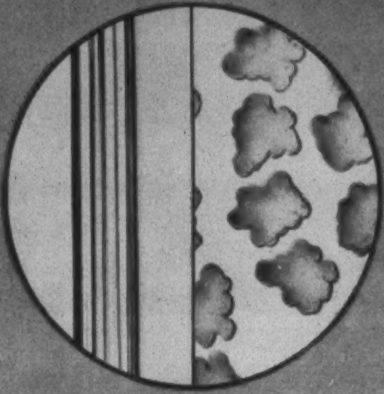
Bahnson System

POSITIVE CIRCULATION
LOWER OPERATING COST

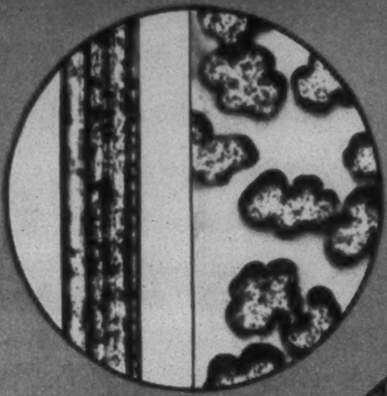
AIR CONDITIONING ENGINEERS

THE BAHNSON CO. WINSTON-SALEM, N. C.

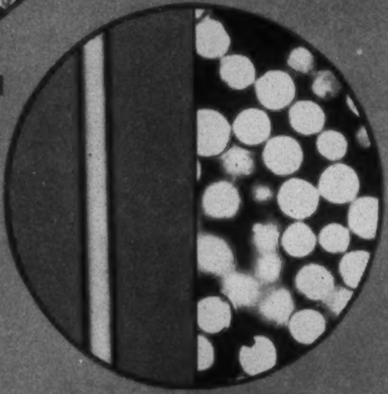
886 DREWRY ST, ATLANTA, GA.
93 WORTH ST. NEW YORK CITY
703 EMBREE CRESCENT WESTFIELD, N. J.
976 W. 6TH ST. LOS ANGELES, CAL.
W. J. WESTAWAY CO., LTD. HAMILTON, ONTARIO



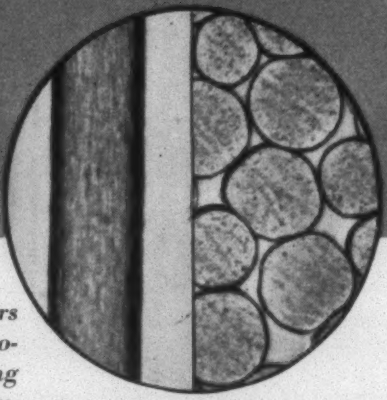
VISCOSE RAYON



ACETATE RAYON



FIBERGLAS



ARALAC

Photomicrographs used thru courtesy of Textile World

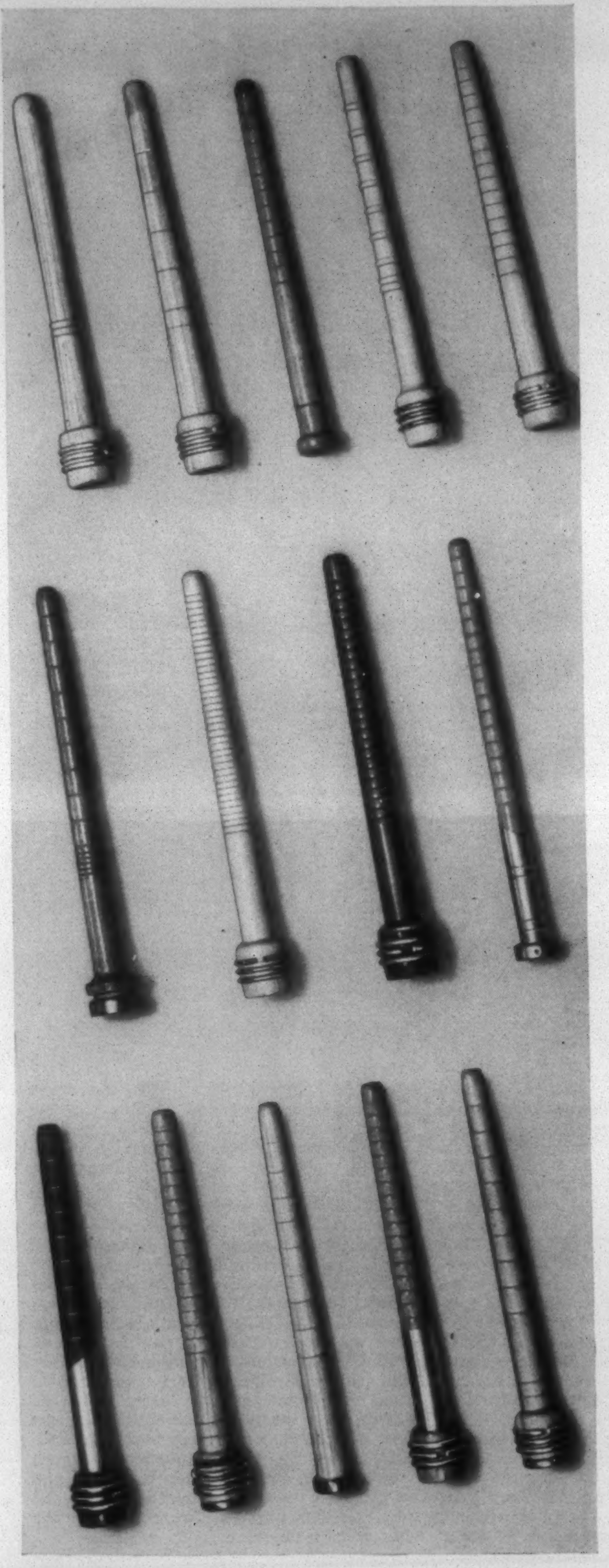
OUR *Experience* WITH THESE AND OTHER SYNTHETICS CAN HELP YOU *Avoid Costly Experiments*

The yarns and fabrics made from these and other synthetic fibers will be used in increasingly greater amounts after the war. Saco-Lowell engineers can help you now in planning and developing the proper organization for the efficient processing of these fibers.

Saco-Lowell has designed the specialized equipment necessary to blend, prepare and spin many of these fibers in simple or complex combinations. Since the number of blends which can be made from these new fibers is almost unlimited, Saco-Lowell machinery has been built with a flexibility which makes it possible to make good yarn from any of these synthetics. ¶At present we can only *tell* you about the things we have been doing . . . and urge you to make plans for tomorrow. If you are planning to enter this new and rapidly growing field, our engineers can be of great assistance to you *now* in helping you select the proper organization and equipment.

Saco-Lowell Shops

60 BATTERYMARCH STREET, BOSTON, MASSACHUSETTS *Charlotte Greenville Atlanta*



U S BOBBINS *measure up* to every new need in Rayon Processing

There's something new almost every day in rayon processing, but for every development, old or new, U S has quickly provided bobbins exactly suited to requirements, in size, contour, and finish.

For coarse deniers, the USSR finish offers the proper smoothness. For fine deniers, particularly of soft yarns like low twist acetate, the USSRC finish gives the necessary high polish to prevent filaments from catching while winding and unwinding.

When filling yarns are to be Hygrolit conditioned, the USSR finish has the required durability. For intermediate conditioning, up to 150°, the US150 finish is recommended. For heavy conditioning in steam at temperatures up to 200°, bobbins with the U S transparent enamel finish, fitted with rust-resisting rings and brass bushings, will stand up with complete satisfaction.

U S Bobbins also withstand the warping effect of conditioning heat and moisture because they are made from straight grain *split stock*, scientifically seasoned for maximum strength.

Tell a U S representative your requirements, and he'll help you select U S equipment that will lower your costs and improve performance, whether you need Bobbins, Cones, Rolls, Shuttles, Spools, or Tubes.

Four Reasons Why it Pays to Consult U S

MILL-WISE REPRESENTATIVES U S representatives cover every field of textile production, and can offer thoroughly experienced advice on the use of U S products in any process.

CONTROLLED RAW MATERIALS Extensive U S owned timber properties allow close control of raw material selection and processing from the source.

AMPLE PLANT CAPACITY Five manufacturing plants, in North and South locations closely keyed to textile production areas, are fully equipped to handle any size orders.

PRECISION STANDARDS U S has cooperated with textile machinery manufacturers for 86 years – can meet the closest possible limits of tolerance in all tests for dimensions, weight, and balance.

U S BOBBIN & SHUTTLE CO.

PROVIDENCE, R. I.
GREENVILLE, S. C.
LAWRENCE, MASS.
JOHNSON CITY, TENN.
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CHICAGO AGENT:
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Young & Vann Supply Co.
Birmingham

THE SEAL OF QUALITY AND SERVICE SINCE 1857

THIS IS NO. 46 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

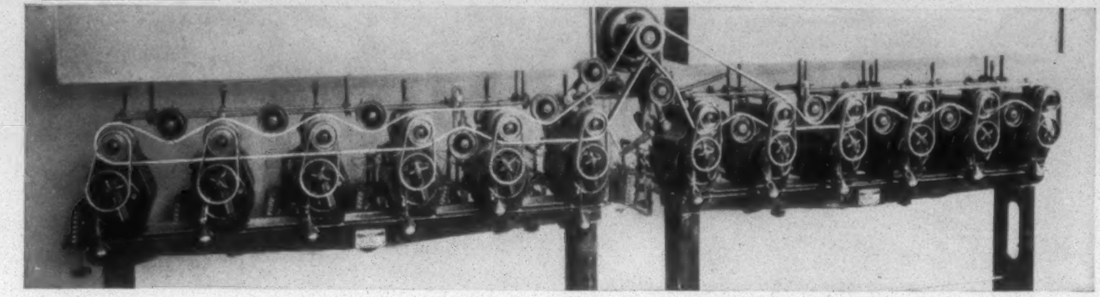


Fig. 1 Clutch Drive with Serpentine Belt—One Belt for Each Gang of Six Spindles.

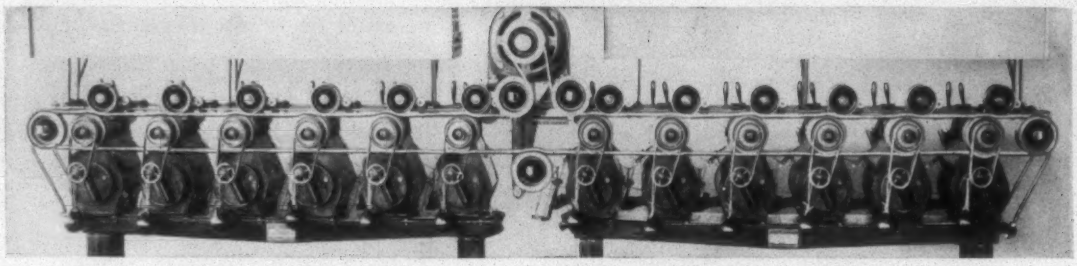


Fig. 2 Straight-Belt Drive, Belt Gain—One Belt for Twelve Spindles.

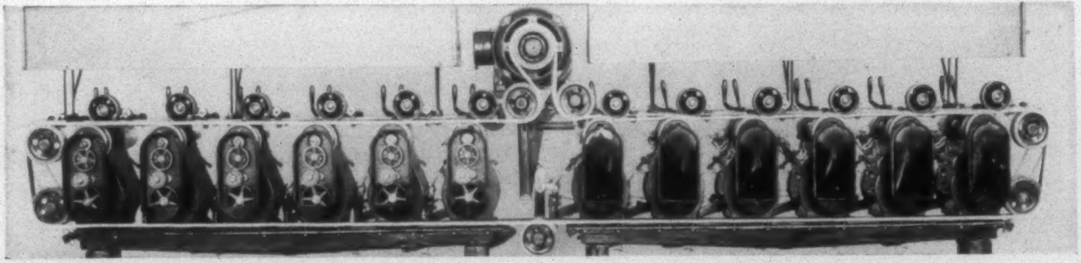


Fig. 3 Straight-Belt Drive, Gear Gain—One Belt for Twelve Spindles.

STRAIGHT-BELT DRIVE

(No. 50 Winding Machine)

No. 50 Winding Machines installed during recent years have been equipped with Straight Belt (L Type) Drive; many installed earlier have been changed over to Straight-Belt Drive. Any machine now using the older clutch-type drive can be changed to Straight-Belt Drive with very little difficulty.

As the name implies, the belt runs in a straight line, in contrast with the serpentine belt line of the clutch-type drive. There is no clutch; the winding spindle is driven directly by a pulley which is actuated by the belt being thrust directly on to it by an Idler Pulley above the belt.

All 12 spindles are driven by one continuous belt, whereas in the clutch-drive machine, there is a separate belt for each gang of six spindles.

There are many advantages to the Straight Belt Drive which is designed for the purpose of having the machine operate at high efficiency and eliminating the difficulties experienced with the clutch drive.

Belt life is longer. When any spindle stops, the Idler Pulley is immediately lifted, permitting the belt to move up out of contact with the Driving Pulley, which is not the case with the clutch drive. Thus wear on the belt is reduced. We have reports from mills that belts have been in operation for 3½ years and are still performing satisfactorily.

Maintenance costs are less. With clutches, clutch levers and bushings eliminated, time and labor costs for mechanical adjustments and settings and the costs of repair parts are saved.

End breakage is reduced. The spindle starts very slowly, because there is no "grab" as with a clutch.

Downtime for repairs is reduced. An individual spindle may be stopped without interfering with the production of other spindles. This is not the case with the clutch drive, where it is necessary to stop the entire gang of six spindles when repairing driving parts of a single spindle.

Wear on end spindles is eliminated. The extra End Idler Pulleys take the strain which on a clutch-type machine is imposed on the end spindles.

Less power is needed. A ¾ HP motor will easily drive 12 spindles.

Experience has proved that an installation of Straight-Belt Drives very soon pays for itself. Many mills have made the change over an extended period; for instance, an initial installation of Straight-Belt Drives will release clutch-drive parts which can be used for replacing worn parts on other clutch-drive machines, thereby saving the cost of ordering new repair parts. Eventually, all of the No. 50 machines can be changed over to the more satisfactory type of drive for approximately the cost of the repairs which would be needed to keep the clutch-drive machines in operation.

See our Catalog in TEXTILE YEARBOOK
23.4.1

"THERE'S A UNIVERSAL WINDER FOR EVERY TEXTILE NEED"

UNIVERSAL WINDING COMPANY

PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA

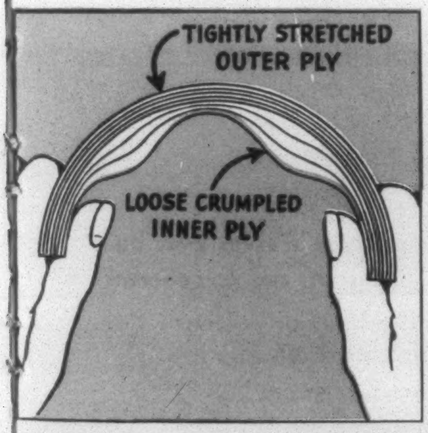
*Reg. U. S. Pat. Off.

MANHATTAN'S

COMPENSATION PRINCIPLE

—with its fatigue-relieving Strength Members—

gives you longer belt life, more power at the Point of Production



Try this yourself to illustrate what happens when your belts lack Compensation. A pad of paper, held firmly and bent has buckling sheets on the inside of the curve. This shows lack of equal tensions and illustrates why the plies of conventional belt "bootleg."

The Compensation Principle makes every ply work under equal stress—and prolongs the life of belts made from today's synthetic rubbers. You no longer need penalize your production by constant alternating of "stretch and buckle" stresses which, in ordinary belt, cause ply rupture as the belt goes round the pulley. Look at the diagram below which illustrates the difference between ordinary belt and Compensated Belt behavior under curve load. Note how Compensation—a patented and exclusive MANHATTAN development—*equalizes ply stresses*, prevents these destructive alternations of "stretch and buckle." Note how smoothly and uniformly the Compensated plies flex around the curve—providing fatigue relief for "war" rubber.

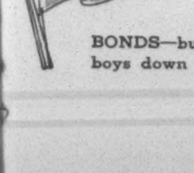
The amazing service you get is the result of MANHATTAN'S specially designed Strength Members so laid in FLEXLASTICS* that you get a truly Compensated Construction—flexible, longer-lived, with high overload capacity and capable of running over smaller pulleys without danger of ply separation or rupture of outside plies.

This principle of Compensation was developed for Condor Compensated Transmission Belt but is now also incorporated in MANHATTAN Conveyor Belts to increase service life where small end pulleys are used.

Users report 3 to 4 times longer fastener life. A paper mill reports a 9-year-old Compensated Belt "still performing like new." "100% more starting load capacity without appreciable belt slip," is still another comment.

Compensate yourself three ways—safeguard production, get longer belt life, increase power transmission efficiency with this revolutionary Compensation Principle in MANHATTAN Belts.

**The term FLEXLASTICS is a MANHATTAN Trade Mark. Only MANHATTAN can make FLEXLASTICS.*



BONDS—buy more to bring the boys down the home stretch.

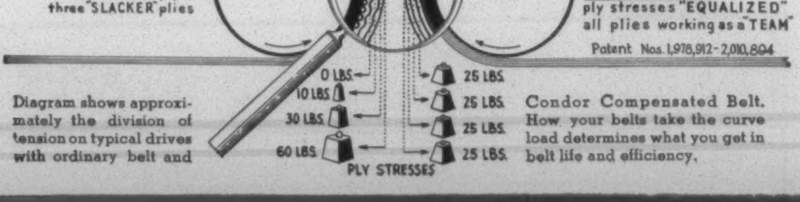
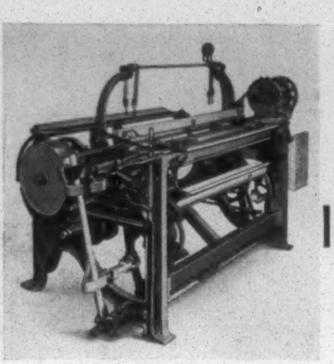


Diagram shows approximately the division of tension on typical drives with ordinary belt and Condor Compensated Belt. How your belts take the curve load determines what you get in belt life and efficiency.

KEEP AHEAD WITH MANHATTAN

THE MANHATTAN RUBBER MANUFACTURING DIVISION
of RAYBESTOS-MANHATTAN, INC.
EXECUTIVE OFFICES PASSAIC, NEW JERSEY

50th Anniversary



1894

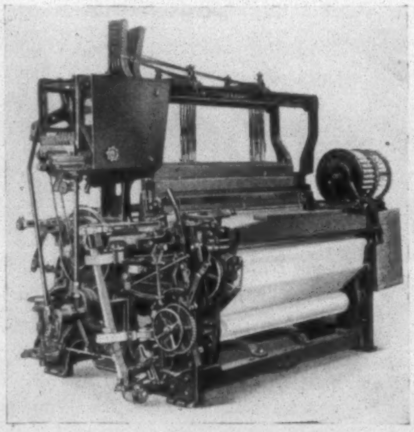
First Loom Shipped in August 1894. It Took 8 Years of Research, Constant Invention, Design, Tests and Redesign, and 180 Patents to Produce the First Northrop Loom.

1895-1929

We Developed 17 Loom Models under 2160 Patents. Some of the Models—like the E—Underwent Steady Change from Year to Year as Improvements were Made.

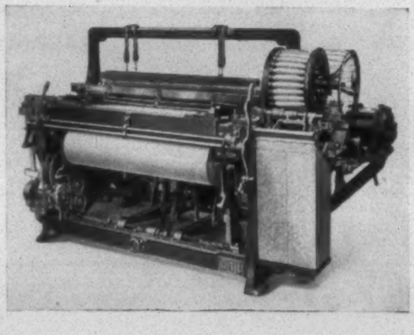
1930-1944

Six Models of X Series High Speed Looms and One Super High Speed Loom Under More than 500 New Patents.



1939

XD High Speed Rayon Loom.
Best Loom for One-Shuttle Rayon Weaves Ever Built.
Result of 14 Years of Research and Experiment in Rayon Weaving.



1944

Latest Version of X-2 Super High Speed Loom for Cotton and Other Fabrics as Improved by Wartime Research.
Into It We Have Built the Results of 50 Years of Experience in Building Automatic Looms.

DRAPER CORPORATION

Hopedale Massachusetts

# of the Northrop Loom

Fifty years ago this month, in August, 1894, the first Northrop Looms to be sold to a mill were shipped from Hopedale to Queen City Cotton Mills at Burlington, Vt. There were 792 looms on the order.

This was the beginning of a revolution in the art of weaving throughout the world and led to the tremendous expansion of the textile industry in this Country.

The Northrop loom was not the result of a chance invention. In 1886 when the Draper business was 70 years old, the three Draper brothers of the third generation decided to undertake the design and manufacture of an automatic loom. There were many patents of automatic devices but not one of them had ever proved practical; nor was any of them in successful operation anywhere.

They started from scratch with their large force of inventors and skilled mechanics who had already given them hundreds of patents on improved machines that had made the Drapers among the leading builders of textile machinery.

The first tangible results of this carefully planned campaign of invention were two shuttle-changing looms, the Rhoades in 1888 and the Northrop in 1889. Both were given extensive mill tests in Fall River with encouraging results. In the latter year James H. Northrop conceived the idea of forcing the spent bobbin through and out of the shuttle and replacing it with a fresh bobbin of filling. As the first step to this end he constructed on October 28 of that year a self threading shuttle. Invention of the two-ring bobbin, of spring jaws to hold and release the bobbin and of the temple thread cutter came the same year.

By the end of 1891 the Northrop rotating battery and such necessary devices as a filling motion to regulate the transfer of the bobbin and a loom thread cutter were patented and given mill tests.

It became evident that a practical automatic loom must have a warp stop motion. Designing a suitable stop motion took longer and cost more than designing the battery, but in 1894 we were in position to begin the manufacture of the Northrop loom for the trade.

Looms were shipped to England and Russia in 1895 and patents taken out in England, Belgium, Germany, Russia, Austria and Spain. From that time until after World War I, Northrop Looms were built in Europe under license from Draper Company.

It is an interesting sidelight on the quality attained in the first lot of looms sold that of the 792 sent to Queen City 424 were being operated at the end of 1914.

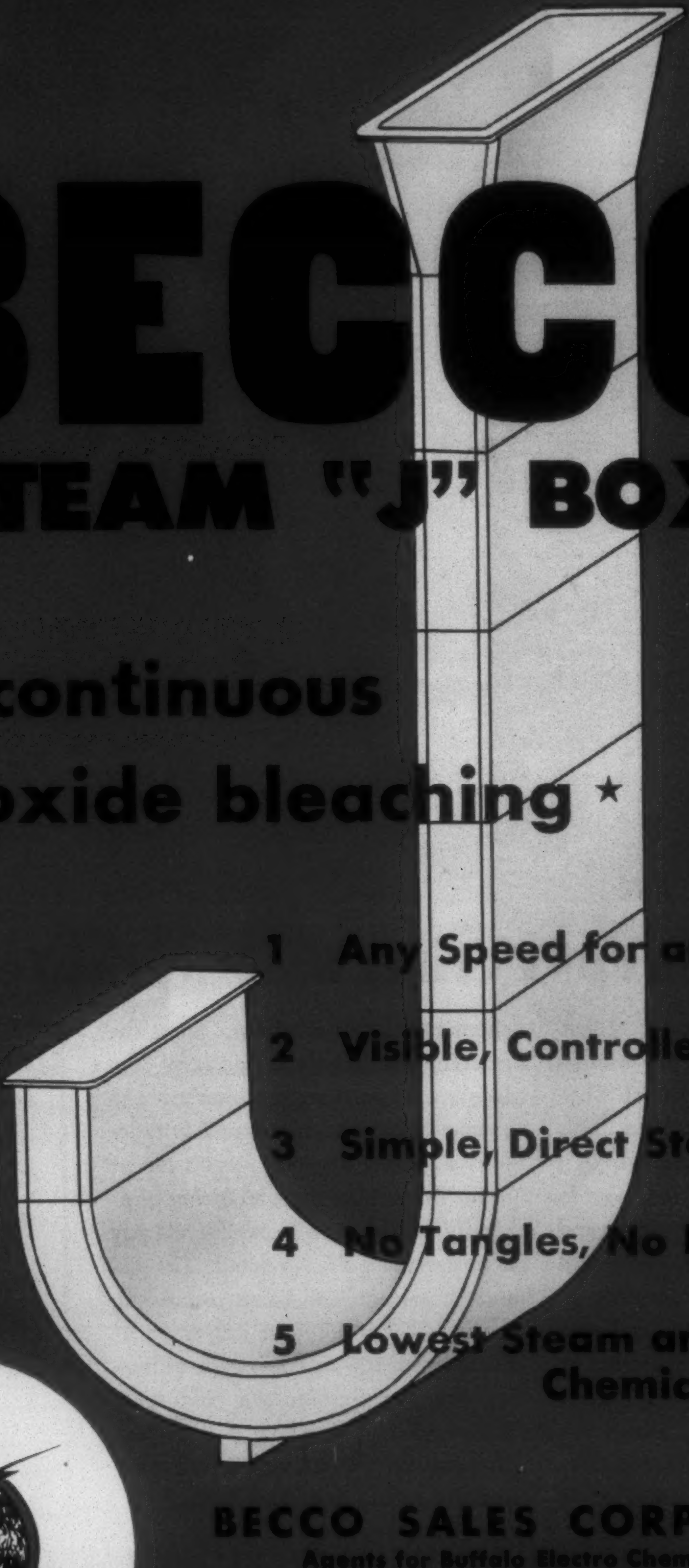
These early looms were run 16 to the weaver. It is needless to recount here the story of the steady improvement that has brought the number of looms per weaver to 100 or more on common cotton weaves and to 40 per weaver on filament rayons and has increased from year to year both the quality and quantity per loom of the fabrics produced.

The Northrop loom was the first automatic loom. Its essential features have been accepted all over the world. After fifty years it still is the best loom in the world for weaving one-shuttle fabrics, due to the diligence and persistence of the Draper organization in striving for something better each year to offer to the textile trade.

REPEL-O-TEX

THE SUPERIOR WATER REPELLENT

ONYX OIL & CHEMICAL COMPANY
JERSEY CITY, N. J.
PROVIDENCE • CHARLOTTE • CHICAGO • LOS ANGELES • MONTREAL • TORONTO



The

BECCO

STEAM "J" BOX

for continuous peroxide bleaching ★

1 Any Speed for any Fabric

2 Visible, Controlled Piling

3 Simple, Direct Steam Heating

4 No Tangles, No Knots

5 Lowest Steam and Chemical Cost

"Nothing Moves but the Cloth"

BECCO

BECCO SALES CORPORATION
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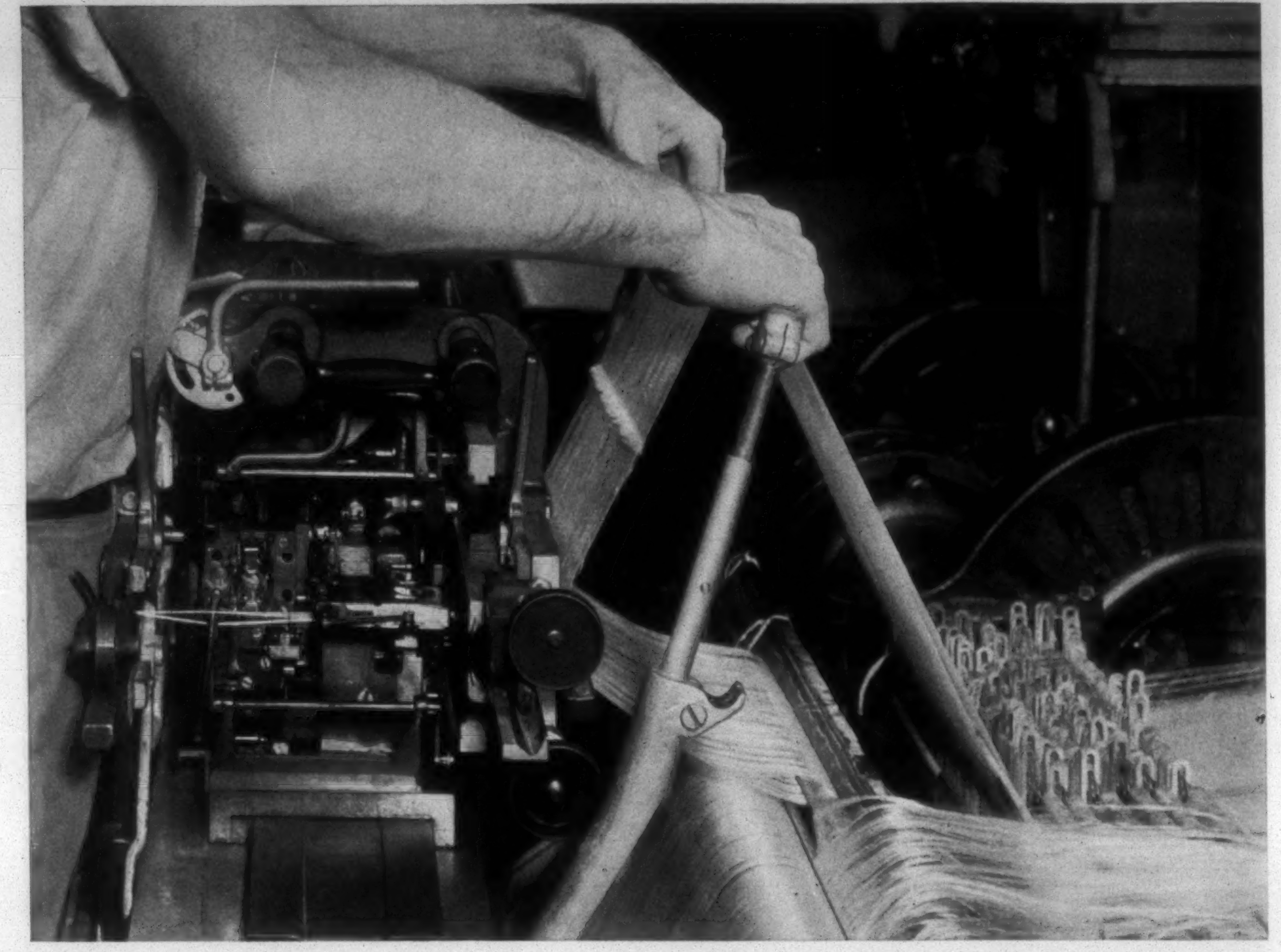
★ Covered by U. S. and Foreign Patents



Rayon Warp-Tying, by Portable Machine

RAYON warp can be replenished *at the loom* by using a Barber-Colman Model "LS" Portable Warp Tying Machine. This machine is compactly designed so it will work directly back of the loom in alleys as narrow as 12". It is light and sturdily built and can be easily and quickly moved from one location to another. It is hand-operated and ties-in the warp in sections, each section or load being approximately 15" wide. The knotting mechanism, which includes a "stumbler" to eliminate missing any ends, is normally operated at about 300 knots a minute. Since the machine will handle as fine as 40 denier yarn, all parts are precision made to extremely close standards and fully interchangeable. A good operator can be trained in a short time, requiring principally the ability to be careful and pay attention to significant detail. The picture shows one load being completed, the operator making an inspection of the uniform row of knots before clearing the machine for the next load. Bulletin F-1256-4, which will be sent promptly on request, will describe this machine to you in greater detail.

For Example . . .

From our field records, we cite this experience of a rayon goods manufacturer working 100% on war material:

Yarn Counts	75 to 150 denier rayon
No. of Ends	2500 to 10,000
Knots Tied per Hour	4000 to 8500
Sley	56 to 280

Comparison of loom hours lost per week due to stoppage for replenishment of warp:

Before installing warp tying machine	325
After installing warp tying machine	50
Loom Hours Saved per Week	275

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • TWISTER CREELS • MOISTURE CONTENT CONTROLS

BARBER-COLMAN COMPANY

ROCKFORD, ILLINOIS, U. S. A.

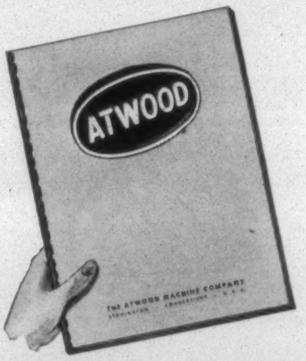
FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND

Now with 3 stars

It Will Pay You To Find Out, If You Have Anything To Do With The Postwar Production Of Cotton, Worsted, Rayon, Spun Rayon, Silk, Nylon or Combination YARNS.

ATWOOD engineering and development work has been carried steadily forward all the time we've been earning *three* stars on our "E" pennant. The new Atwood Ring Twisters, Up Twisters and other yarn preparation equipment are going to give you an entirely new set of production standards.

Now is the time to check up on what's going on here at ATWOOD. You'll find it highly interesting and profitable to get in touch with us and get the whole story as it applies to *your* yarns and *your* production needs.



The new ATWOOD Catalog contains information and reference data of real value to every yarn producer. A letter on your company stationery will bring you a copy by return mail.

THE ATWOOD MACHINE COMPANY

STONINGTON CONN., U. S. A.

SALES OFFICES: STONINGTON · CHARLOTTE · LOS ANGELES · MANCHESTER, ENGLAND · BUENOS AIRES
SAO PAULO · MEXICO CITY · MELBOURNE · SYDNEY · BOMBAY · MADRAS

3 TESTS

...that show why "Lively Spinna Calf" last longer

①

Test No. 1 proves Spinna's high friction value — which means less "eyebrowing". Rub a piece of Spinna Calf against a smooth surface, pressing down slantwise. It will move jerkily, for friction will hold it back. Make the same test with other roll covering materials. You'll see why Spinna's superior friction surface will do a better drafting job . . . and will carry waste well onto the clearer.

②

Test No. 2 gives proof of Spinna's ability to hold its shape — no hollowing-out. Take a Spinna-covered roll off the frame and see if the traversing action of the yarn has caused the leather to spread toward the edges. A Spinna cot will hold its shape longer because the leather springs right back after the sliver has forced it to one side.

③

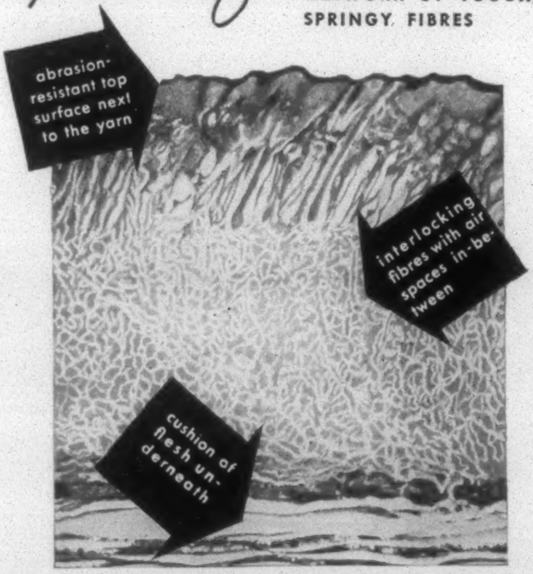
Test No. 3 demonstrates Spinna's resiliency — no damage from ordinary hard ends. Lay a length of yarn on a table and roll a Spinna-covered roll over it. Then look quickly at the leather. There will be no trace of a groove. That's because Spinna's triple-resiliency allows it to take an ordinary hard end and then recover its original smooth surface without delay.

For freedom from the troubles that may interfere with spinning frame efficiency and yarn quality . . . and for the longer life that Spinna Calf's strong wearing surface promises . . . tell your roll coverer: "Spinna Calf".

Lively SPINNA CALF It's Triple Resilient

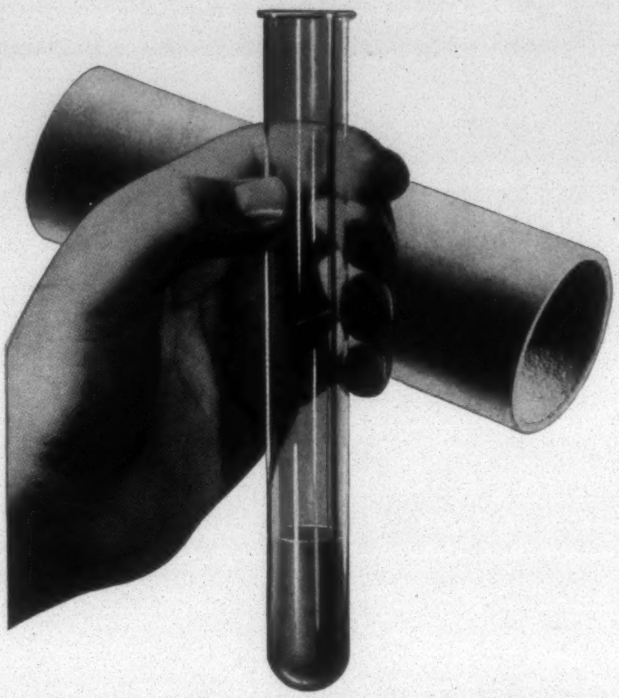
ROLL COVERING

Spinna Calf.. AIR CUSHIONS IN A NETWORK OF TOUGH, SPRINGY FIBRES


abrasion-resistant top surface next to the yarn
interlocking fibres with air spaces in-between
cushion of flesh underneath

"If you want roll covering that is adjustable **to all** counts . . . can take ordinary hard ends without leaving grooves . . . and stays kind to the yarn for up to 18 months and more in front line positions . . . then Spinna Calf — the most generally-used calfskin — is your best choice."

THE APRON MATERIAL WITH THE INGREDIENT THAT REDUCES STATIC TROUBLES



Static electricity is a major cause of spinning troubles, causing the yarn to cling to metal surfaces or wrap around the top front roll . . . making the fibres stick out in all directions, puffing the sliver open after leaving the front rolls.

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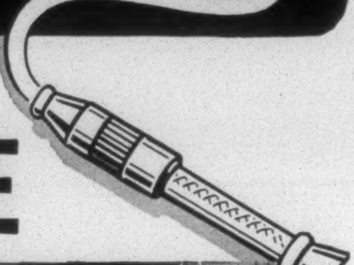

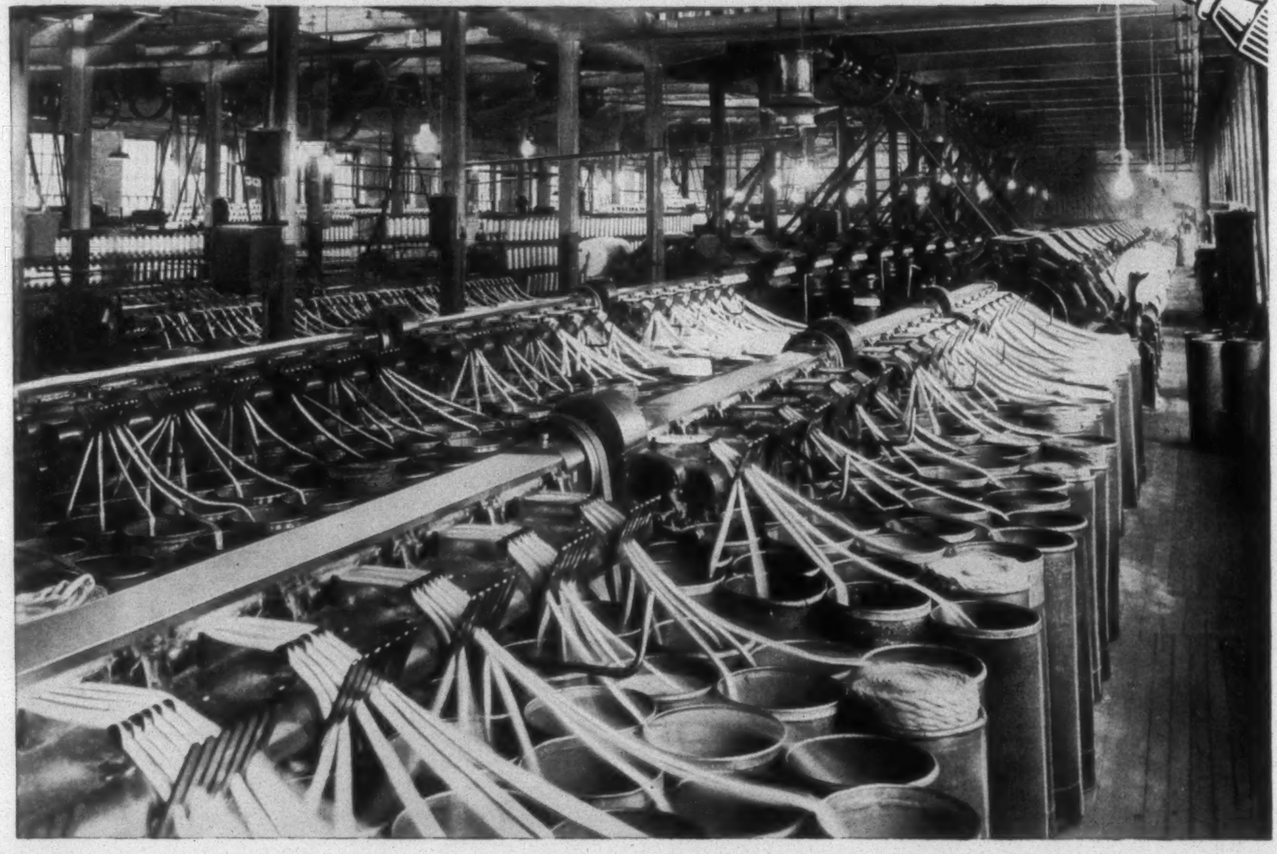

- Very often, *correct* lubrication is the remedy for difficult maintenance due to excessive wear.

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TEXTILE BULLETIN

Vol. 66 August 15, 1944 No. 12

Thoughts On A New World

By W. M. McLAURINE – Part Two

NOW as we stand at the well developed and undisputed frontier of scientific and economic success and realize that—in spite of our arrival at this point—all is not well, perhaps we should pause and review our route and study the incentives that have pushed us this far and endeavor to detect the causes for the weaknesses of our position.

We live in the richest and most diversified area of the world. We boast of our farms and field and forests—our factories and financial institutions, our schools and colleges, our medical and scientific prowess, our transportation systems and hundreds of other possessions. And yet there is a constant rumble of social and political distress ever consciously creeping discordantly into the symphony of material success. This rumple is the resonant wrath of certain unsatisfied cravings of persons who feel that in the development of material resources there are certain necessary personal and human factors in the present progress that have been overlooked.

These rumblings have been heard on the siesmograph of human relations for a long time but only recently have they been analyzed as factors needing attention. World War I was an earthquake of strong foreboding indications. It was not caused alone by the economic greed and selfishness of certain leaders. It was the call of the forgotten hearts of humanity for recognition and in order to attract attention, it assumed an economic aspect.

"Life is more than meat and the body is more than raiment" was expressed by the prophets of old. Life is not simply physical, it is spiritual, social, human and as such it demands that it be treated. There have always been the strong and the weak, the leader and the led, and since our early records, the rich and the poor, the exploiter and the exploited. Perhaps in man's ignorance of social and economic laws there will always be these conditions in our society. Even as old as the race, it is still in its infancy in matters dealing with ethics and ethical applications—in fact, we are often at a loss to know what is ethics and how to apply them. The spiritual development of man proceeds so slowly that it constantly remains in a state of confusion because of the environmental influence of materials and scientific progress. We do have some indications on sign-posts, which point in general directions. Now that these wrong routes have been discovered and new signs are up, we look back on our mistakes with regret and somehow try to make ourselves believe that conditions and social attitudes made such policies necessary and that we were only a part of those policies and could not do otherwise.

The chief motivating factors were those of acquisition and a firm conviction in the fact that there must always be "hewers of wood and drawers of water." The social and economic conditions of the underprivileged were of interest only to the extent that these conditions did not interfere with their services.

A review of certain social legislation controlling economic aspects of life indicates the lack of a proper perspective of economic and political leaders in the days that have passed. The Fair Labor Standards Act, the Walsh-Healey Act, the National Labor Relations Act, the Social Security Act and other less impressive legislation indicate a move by the electorate to ameliorate or cure certain social and economic inequities that warranted attention.

A Revised Social Philosophy

They were and are an indication that employers must employ a greater social philosophy in labor relations than they have had. These acts for the most part have shown, and in some cases convinced employers, that their reasonable observance and application is not only not detrimental to social and economic life, but advantageous. Of course, there are extreme interpretations of these acts and sometimes unreasonable interpretations and applications but, by and large, as the pendulum swings back into a conventional norm and after prejudices of both parties affected have abated and the rule of reason and righteousness prevails, all except the ultra-conservative, and the ultra-radical will appreciate the honest intent, modified by political and selfish pressures, that have been motivating these acts, intended to compel consideration of the employee by even the most inconsiderate employer.

These acts and the directives resulting therefrom are indications of the social demands requested from employers, and the fact that they are a part of our recognized code of laws, is an evidence that they have public approval. A resistance of their reasonable application, or a radical interpretation and application by biased minds, may make amendments or other legislation necessary.

The point stressed in this discussion is the fact that there is a social awakening and social progress is evident and compulsory on the part of all. People are important and must be considered for themselves and for their value as citizens. All people must have an opportunity to progress mentally, morally, physically, financially and otherwise. No nation is better than its average citizen, hence the average citizen must be improved constantly.

Man should not live by the letter or the law but by the spirit and intent. In observing the new social legislation so many people restrict their observance to the narrowest intent made possible by its literal statement. There is a spirit and intent behind every social policy that cannot be written into words and even if it could be, words are difficult to interpret, thus controversial. Few people are so stupid as not to be able to interpret the intent of law or public urgency. Again, most people in observing legal directives, or compulsions, congratulate themselves because of their good policies of living within the law. This is a fact of some consolation in that the observer can feel a certain safety from the penalties of violation.

Going It One Better

If such is the attitude, it may not develop much of a social philosophy on the part of those who assume it, nor will it make for good labor or industrial relations. This statement applies to both employer and employee. No one deserves any credit for doing his duty only; this is expected of good citizens. When one goes beyond the beneficent intent of the law, when one goes beyond the demand of duty, when one goes the second mile, after having been compelled to go the first mile, social credits begin to accumulate. Suspicions begin to die and co-operation begins to grow stronger.

The human side is the important side in this New World that we have only recently entered. Money will be necessary, profits will be necessary, people will be more necessary. There will always be work to do, hard and disagreeable work. There will always be employers and employees. Wages, hours, working and living conditions will continue as important factors in our industrial life.

Labor has made vast strides in its demands. It has gone far afield in its policies. There is no doubt about reactions and retrenchments of some of its policies. It will realize some of its own mistakes and the public will make it conscious of others; however, the social and economic philosophy of labor will not die. It may be modified or amended but the great awakening on the part of workers everywhere can never be lulled back to sleep.

W. M. McLaurine, secretary and treasurer of the American Cotton Manufacturers Association and author of the accompanying article, began his series on the "New World" in the last issue with expressions intended to set a theme for the five installments. The current article gets down to cases, and should cause some serious thinking about the "Human Side" of post-war business operations. One problem of settling down to a peace economy—that of the returning serviceman—is particularly recommended to readers' attention. Other articles which follow this one will deal with economic considerations, political thinking and business principles of the "New World."

This is only a narrow phase, a selfish phase of the human side of industry. Dr. Nourse of the Brookings Institute says that one of the defects of industry is its lack of social consciousness, or better, its lack of social expression.

The average industry is not only an economic asset to its owner or corporation, it is also an economic asset to the community in which it is located. Therefore, it has not only a social responsibility for the people who work therein, it also has a social responsibility to be discharged in the larger community. Here again the law applies. The average industry boasts of its payroll contribution and taxes to the community, its purchases and expenditures which contribute to the community, and the industrialist rather self-righteously rests upon his laurels as having discharged his obligations and deserves to be considered a good citizen. No one would detract from any of these contributions or invalidate them in the least. They are all fine and are distinct factors in the financial progress of the community.

Here again, these above named contributions are necessary and unavoidable contributions to the larger community. What Dr. Nourse had in mind was over and beyond these contributions. Perhaps a suggestion or two will orient the thinking of those who read. The entire world seems to be breaking down physically. If not that extreme, then in nearly every family there is need for hospitalization or medical care. So large has become the demand and so expensive are the costs, that socialized medicine is demanding much consideration in Congress. This consideration is being motivated by an electorate which does not fully realize its implications and practices.

There are many business institutions, banks, industries and otherwise that could take a part in relieving this government pressure by providing medical centers in which aid is easily accessible and charges reasonable. There are a few outstanding examples in our nation of this kind of social expression on the part of business men. This builds social appreciation beyond measure and expresses an attitude that needs attention in the New World.

The Importance of Recreation

In the average city or local community there is a dearth of public playgrounds and recreational facilities. Their value was not considered in the days of long hours and little leisure. Now that the recreational side of man is found to be necessary, these facilities are often regarded as too expensive. People who have the means are often sheltered in the spaciousness of country clubs and summer homes and fail to appreciate the pressure of the average citizen in his demands for relaxation and rest in a wholesome environment. These are two suggestions that carry with them an impact of social appreciation that only the annals of time can calculate. These are examples of real social contributions. They tend toward building a happy and healthy generation of social attitudes and are an expression of the real Christian democracy that the average American citizen desires.

There is another Biblical quotation which says that what a man gives away he keeps and what he keeps he loses. This expression needs to be interpreted by a fine social philosophy. It contains nothing contrary to the democratic doctrines, nor does it affect the—*(Continued on Page 52)*

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New Plant Cafeteria Spurs War Production At Beaumont Mfg. Co.

THE more than 1,500 war workers at Beaumont Mfg. Co., Spartanburg, S. C., who have produced duck efficiently for the armed forces since long before this country's entrance into the war, were one of the first group of cotton textile employees in the South to win the Army-Navy "E" award. This record of extraordinary work has been continued since the first recognition, the result being that three white stars have been attached to the plant's pennant. As an added impetus for the employees, the company has just opened a new plant cafeteria, outstanding in the textile industry according to experts in the field.

Of the many features that make this cafeteria unusual in the cotton textile industry, two should be mentioned first—the in-feeding schedule so each employee will have the opportunity for a hot meal during shift operations in a quiet and restful dining room, and the out-feeding schedule so the families of the employees will be served also at different hours. This is distinctly a forward step taken by the company so it will be possible for mothers, wishing to do war work, to serve their country without the added strain of housekeeping, or concern for their families' health from a nutrition standpoint.

The beautiful two-story brick cafeteria building has been erected adjacent to the mill on the south side of North Liberty Street with an entrance for the employees from the bridge that connects the two sections of the mill. This gives easy access to all employees. The dining room is on the first floor and employees enter down a long ramp which will eliminate the strain of long stairsteps.

Nothing has been spared in either the planning or the execution of the building, its equipment and its personnel. The dining room is finished to a height of six feet with glass tiles in beige with base board and top edge in maroon. The ceiling is worked out in a pattern in five shades ranging from a deep ivory to a rosy beige and the floor of rubber tile reflects, in a deeper tone, the color motif of the beige tiles. The serving counters are complete with steam tables, coffee urns, glass shelves for desserts and refrigerated containers for ices. The tables, each seating ten very comfortably, are not crowded together, and while placed to seat 200 at a time, allow ample room for people to walk comfortably to and from all parts of the room. Schedules have been arranged so the employees arrive in groups, extending the serving period to two hours for the shift workers. The meal for these workers is served in the middle of each eight-hour shift, breaking the work period and giving an opportunity for relaxation as well as a place to eat a good substantial meal. Those who prefer bring their own lunch, but all lunches must be eaten in the cafeteria. Smoking is also allowed there. As one group goes up the ramp from their lunch period, another group can enter at the same time down an adjacent ramp without rush or confusion in either direction.

Above is a view of the front of the new plant cafeteria opened recently for employees of Beaumont Mfg. Co.

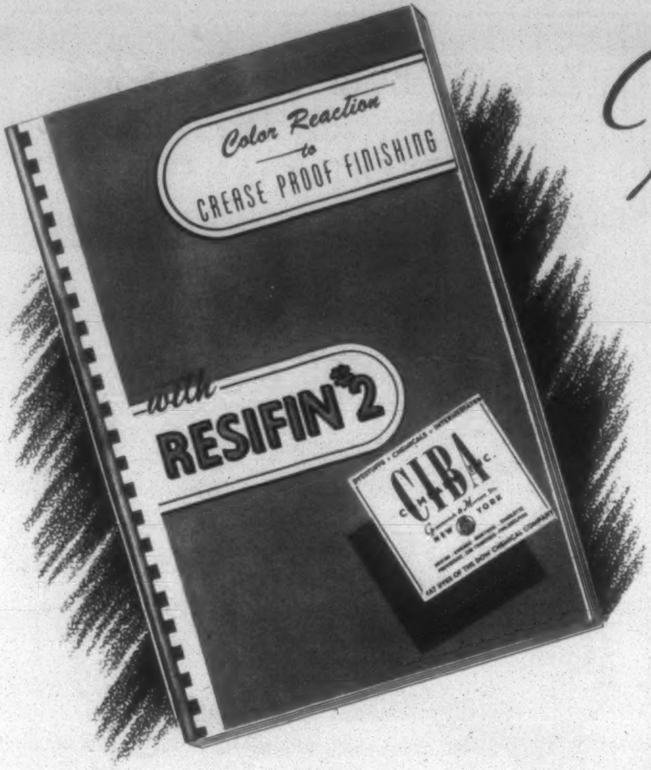
Backstage Facilities

Beautiful and restful as is the dining room, the beauty and convenience of the kitchen is greater. There the walls of white tile rise to the high ceiling, permitting them to be washed from top to bottom, so no particles of dust will mar its surface, or drift into the food. Great refrigerators guarantee that perishable foods are kept uncontaminated. Three huge ranges, presided over by a master chef of years of experience, are supplemented by an aluminum steam-jacket cooker for soups and a steam cooker with three compartments where such foods as pork can be cooked to bring out the underlying flavors and to such a degree of perfection that each portion will be tender and luscious. The bread and pastry department is apart with large ovens where home-made rolls, pies and cakes may be baked at exactly the right degree of temperature—a most necessary provision, as all good housekeepers know. The dish-washing room is entirely apart and there steam compartments for glasses, silverware and crockery assure necessary sanitation.

The work of preparation is carried on in the work rooms in the basement. There two large built-in refrigerators hold all perishable foods; one to be used for food for immediate use and the other as a holding room for meats that should hang before using. One can only compare these to the cold storage refrigerators of the meat packing houses. The meat slicers and work tables for meats and vegetables are screened entirely in and away from other sections.

This gives some idea of the care and thought given to the serving and preparing of the meals, but that, however, is not the whole story. Entering from the sidewalk on North Liberty Street, one goes through large glass doors into a lounge, nicely furnished—

(Continued on Page 53)



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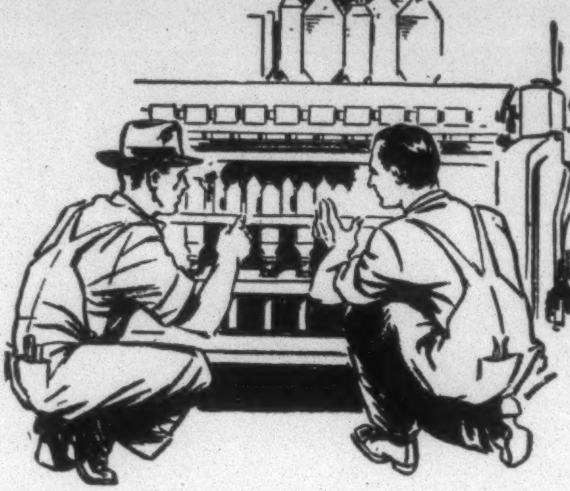

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The American Tropics—A New Home for Manila Hemp

By EARL N. BRESSMAN, Director, Inter-American Institute of Agricultural Sciences

RECENTLY on an elevation in Costa Rica I stood and looked out over 12,000 acres newly planted to abaca, better known as Manila hemp. It was an impressive sight. Abaca resembles and is closely related to the banana plant. Growing luxuriantly in the tropical sunshine, it adds to the attraction of the landscape. But the most impressive aspect of the abaca plantation was not its scenic attraction. Rather it was the industrial significance of the rise of this plant in the American tropics as a large-scale commercial enterprise, holding prospect of becoming an established product of the New World's tropical agriculture.

The abaca fields hold meaning for the United Nations war effort, too. Those 12,000 acres in Costa Rica, part of the 40,000 acres which are being planted to abaca in Central America, demonstrated that the Americans are solving a supply problem resulting from the loss of fiber imports from the Far East. When the Japanese overran the Philippines, they cut off the source of virtually all the Manila hemp used by the United States. Before Pearl Harbor, the United States consumed about 100,000,000 pounds of Manila hemp yearly. This was a serious loss. Manila hemp makes high-grade rope. The Merchant Marine and Navy use Manila rope. Without this fiber, prized for its strength and resistance to salt water, merchant and naval fleets would be handicapped. Any sailor can testify to that. Manila rope also does stout war duty in mining, in building and, in fact, in any operation where high-grade cordage is necessary.

Abaca fiber was only one of several tropical-grown products formerly imported largely from Far Eastern areas now in control of the Japanese. Most publicized have been rubber and quinine. The story of abaca is the reverse of that of rubber and quinine. Rubber and cinchona trees were transferred from their native ground in Latin America to the Far East, improved through scientific culture and became the basis of profitable plantation industries dominating the world markets. Abaca, on the other hand, is a newcomer to the American tropics—a newcomer with a promising future.

In the case of abaca, furthermore, a fortunate combination of circumstances enabled the Americans to move quickly toward replacing the supply lost in the Philippines. In transplanting abaca to Central America, the plant scientist has done a notable bit toward winning the battle of production. The success of the abaca operation is a timely reminder of what the American countries have to gain by scientific improvement of agriculture and the introduction of crops which contribute to the expansion of inter-American trade.

Scientific interest in bringing abaca to the Americas goes back more than 50 years. Early in this century, particularly, efforts were made to germinate abaca seed in tropical areas of Latin America. Either the seeds failed to germinate or the plants did not do well. Meanwhile, the Philippine growers strengthened their grip on the market. The story of the rise of abaca as a western hemisphere crop really begins late in August, 1925. Then the steamship *Ethan Allen* departed from Malita, Davao, Philippine Islands, with a collection of 1,350 abaca rhisomes and suckers planted in moveable containers. Also on board was Harry T. Edwards, in charge of the United States Department of Agriculture's research on plant fibers other than cotton. He had collected the plant material. Mr. Edwards is one of those patient plant hunters who have done so much for the transformation of the world's economy, whether it be in the rise of rubber in the Far East or of abaca in the Americas. In taking abaca to Central America from the Philippines, he was only getting a repayment on the world's heavy debt to the Americas for such plants as rubber, cinchona, the potato, cocoa, corn and manioc. Today the plant hunter has competition from the chemist in the laboratory. Still he remains an indispensable, though often unnoticed, agent of economic change.

The sailors of the *Ethan Allen* probably had no presentiment of the importance of the 255 packages of abaca plants which were put on the deck of the vessel at Malita. Nevertheless, when storms arose, they worked willingly to shift the plant material to shelter. After a voyage of 43 days, on Oct. 3, 1925, the *Ethan Allen* reached Colon, in the Canal

An idea of how abaca is grown may be gained from the illustration above. In the picture plants are being stripped to provide seed-heads for planting other areas.

Zone, with the plants which became the basis for the abaca-growing industry now rising in Central America. From Colon, the plants were moved to Bocas del Toro in Panama, thence to a quarantine station on Colombus Island, off the Panama mainland. More than 1,000 of the plants in the original shipment were alive when they reached the quarantine station. Of these, some 750 were in good condition. Many failed to grow. Yet three months later about 500 plants had made a sturdy start. The progeny of these plants have furnished the material for the planting of more than 26,000 acres of abaca in the past two years in Costa Rica, Guatemala, Honduras and Panama.

Already some 3,000,000 pounds of abaca fiber have been produced in Central America. The full program for the planting of 40,000 acres eventually should produce, it is estimated, from 50,000,000 to 60,000,000 pounds of fiber annually, approximately half the pre-war demand of the United States. This would mean an appreciable addition to the cash income of the producing countries and to inter-American trade, which rests in large part upon the sale of the products of tropical agriculture to the United States.

As the migration of abaca to the Americas illustrates, the plant scientist needs the help of mechanical genius in his efforts to introduce new crops for industry. In the production of rubber, fibers and other tropical-grown materials, the Far East has one great advantage over the Americas. This advantage is a tremendous reservoir of labor. Hand labor has been a major cost item in the production of abaca, as well as in rubber, silk, jute. Machinery can help Latin America overcome this advantage in competition for export markets.

Fiber-cleaning machinery was used in the Philippines before Pearl Harbor. But further work had been done in perfecting processing machinery which lowers the cost of cleaning abaca in Central America. This machinery, especially suitable for large-scale plantation operations, improves the outlook for establishing abaca as a permanent crop in the American tropics.

J. H. Permar of the United Fruit Co. has been as zealous in his work of improving the mechanical processing of abaca as Mr. Edwards has been in bringing the plants to Central America. These two men make a team whose names will be associated with the successful development of abaca in the tropical Americas.

Urgent war demand for fiber has given abaca an extraordinary opportunity to make it commercial debut in this hemisphere. American mechanical genius will help keep it here after the Japanese have been driven out of the Philippines. And further research work for the improvement of abaca as an American crop is being undertaken by the Inter-American Institute of Agricultural Sciences at Turrialba, Costa Rica. This is part of general research planned for the banana plant and its related plants.

This points a lesson for the establishment in Latin America of other crops which have had difficulty competing with the low-cost production of the Far East. Scientific improvement of plants for the development of high-yielding and disease-resistant species, plus the reduction of costs through use of machinery and efficient plantation practices, will help tropical agriculture in the Americas overcome cost advantage of areas with lower wage scales and abundant labor.

Cultivation of abaca could not—*(Continued on Page 46)*

Hard Job Ahead in Restoring Philippine Abaca Industry

THE restoration of the abaca industry will be one of the first and most important jobs facing the forces that will drive the Japanese from the Philippine Islands. The armed forces wil meet a peculiar problem in dealing with the industry that produces the famous Manila fiber since even prior to the war it was almost exclusively in the hands of the Japanese.

The Japanese began their penetration of the abaca industry shortly after the last war and, with the beginning of the present war, some 23,000 Japanese were located in the Philippines in the abaca growing districts. By the time the islands have been reconquered the civilian Japanese engaged in this industry either will have left the Philippines with such of their forces as may manage to escape, or will have been interned, and it will be necessary to recruit native Filipinos for both management and labor in the industry. Abaca has been grown largely in the province of Davao on Mindanao, the great island at the southwestern tip of the Philippine archipelago. Before the war the Philippines produced more than 90 per cent of the world's supply of abaca fiber and about one-third of the production came to the United States for a price of approximately $7,000,000.

Abaca is a traditional fiber in Philippine usage. It was, and still is, used for textiles, as well as for cordage and other purposes. The first samples of the fiber were brought to the United States in 1820 by Lieut. John White of the United States Navy, who demonstrated it in Salem, Mass. This gave the initial impetus to Philippine trade with America and Manila rope was soon regarded as indispensable by New England fishermen as well as by the Navy.

During the period of Gen. Leonard Wood's governorship of the Department of Mindanao-Sulu, the abaca industry was largely in American hands since the general encouraged a number of his former soldiers to establish plantations for growing the plant. Practically all of these American-owned plantations were sold to Japanese interests beginning in 1916. The constitution of the Philippines does not permit public lands to be bought or leased by any persons other than those of Philippine or United States citizenship. This provision of the constitution threatened to halt the growth of the Japanese land holdings, but they soon perfected other methods of obtaining control of public lands for abaca growing.

One method was to establish a corporation in the name of a Filipino, one of some standing if possible, or occasionally in the name of an American. The corporation would then obtain a lease on government land and Japanese interests would provide money for its clearing and development. In return for the loan, all of the stock would be turned over to the Japanese as security. The loans were rarely, if ever, repaid, and effective control of the corporation therefore remained vested in the Japanese. The person in whose name the corporation was formed usually received about 15 per cent of the proceeds for the loan of his name. By another method, the Japanese would form a management contract with the lessee, developing the land, paying all expenses and giving the lessee the usual 15 per cent for his part in the bargain.

These legal dodges of the Japanese that allowed them to gain nearly complete control of an important industry and to establish a large colony of aliens in the islands, caused considerable concern both to Philippine and United States officials before the war but a solution of the problem was never agreed upon. Once in possession of land suitable for abaca growing, the Japanese subdivided it and brought in Japanese tenants to operate the small plots. These Japanese in turn usually employed Filipino laborers to do the hard work. Most of the Japanese in Davao are Okinawas, the same type of Japanese used in colonizing Saipan. They were selected with care by Japanese officials in charge of emigration, treated well by the company managers, and reports indicate, have been and will be entirely loyal to Japan.

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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Ten Years of Cotton Textiles—1934 to 1944

By W. RAY BELL, President

Association of Cotton Textile Merchants of New York

For some years Ray Bell, left, has been presenting his annual survey of the cotton textile situation. His summary has always given a very clear picture of what the industry has done, is doing and can expect to do. The information he furnishes this year is especially valuable in that it deals with a period of time which has seen a galaxy of government directives, shortages, operating difficulties and their effect on the industry. This period may well bring about a retrenchment in textile demand from the military, but Mr. Bell foresees in the remaining war months increasing government control over distribution, with much heavier percentages of production directed through systems of graded priorities into specific end-uses not only for the war effort but in fields previously reserved for unrated civilian business.

WITHIN the ten-year period covered by this 13th annual survey of the Association of Cotton Textile Merchants of New York, the shrinkage in installed spindleage has been approximately 25 per cent, or 7,595,000 spindles. Half a million of these went out of business last year, in the face of unequaled demand for all types of cotton products. Prior to 1941 the stress of competitive influence was held accountable for the continued extinction of marginal mills. Under wartime conditions of voracious demand, other explanations must be sought for the disappearance of capital assets in the form of productive facilities.

Without dissecting particular situations in these liquidated plants, it can be generally assumed that current and future prospects for their successful operation were not deemed propitious. What effect on the decision to abandon operations has been the multiplicity of regulations about operating conditions, distributive complications, and the discouraging aspects of price control, can only be surmised. The facts are that Washington controls now usurp the normal benefits of a sellers' market and marginal units lack these customary incentives despite urgent need of their production.

Machinery manufacturers advise that an insignificant number of 7,752 new spindles were installed during the year. This includes everything, not only for new installation but for additions and replacements. Since the textile machinery plants have been largely converted to armament production, interference with the normal replacement of machinery in cotton mills was to be expected. Such an extreme decline emphasizes the tremendous job of modernization which awaits the post-war period, assuming there is adequate profit incentive to attract risk capital. According to our calculations, less than 30 per cent of the industry's present spindleage, or 6,180,000, is under 18 years of age.

Under intensive war operation, with its accelerated wear and tear, most plants in the industry will require substantial refurbishment to maintain their domestic competitive standing. While the spindleage situation may not be typical of all machinery classifications, it can be safely asserted that domestic requirements of new textile machinery can absorb the full output of machinery makers for several years to come. Unless cotton mills are well equipped physically they will be unable either to meet future competition or to furnish employment opportunities comparable to the needs of our returning armies. These are major considerations which recommend the accumulation of reserves for plant renovation.

In spite of equipment handicaps in 1943, the industry gave a most creditable performance, second only to the preceding year in both spindle hour activity and cotton consumption. Spindles idle during the entire year hit an all-time low although the average number of active spindles on a monthly basis was 300,000 less than in 1942. Their total operations exceeded 125 billion hours, a drop in spindle hour activity of slightly over six per cent. Cotton consumption for the calendar year totaled approximately 10,665,000 bales which, compared with the peak performance of 1942, was a decline of about 6.75 per cent. Yet total spinning activity was 40 per cent superior to the pre-war (1936-1939) average and the excess in cotton consumption amount to 3,717,000 bales.

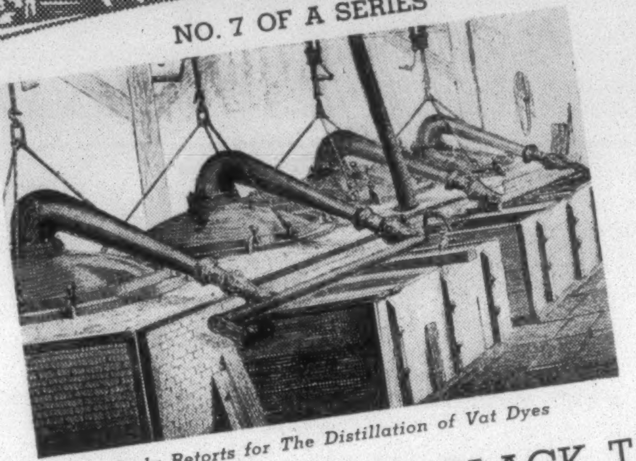
From the following table of quarterly performance records, it is evident that the industry reached a height of activity in the second quarter of 1942 from which it has been unable to stem the slow but gradual decline in operations and output:

1942	Spindle Hour Operations (Million Hours)	Cotton Consumption (Bales)
Second quarter	33,920	2,925,000
Third "	33,657	2,879,000
Fourth "	32,721	2,821,000
1943		
First quarter	32,714	2,793,000
Second "	32,210	2,757,000
Third "	30,302	2,554,000
Fourth "	30,153	2,557,000
1944		
First quarter	29,857	2,533,000
Second "	29,088	2,414,000

The causes of this retrogression are well known but the

THE ROLE OF CHEMISTRY In the Development of Textiles

NO. 7 OF A SERIES



Early Retorts for The Distillation of Vat Dyes

BRIGHT DYES FROM BLACK TAR

For thousands of years man drew on the plant and animal life around him for coloring. With the coming of the industrial revolution the demands of world commerce grew and man searched for new sources of color. In the waste of a distillation of vegetable indigo Otto Unverdorben discovered Anil in 1826. He named it Crystalline.

A little later—1834—F. F. Runge, a German scientist, isolated Kyanol from the refuse of the gas houses, the black sludge called coal tar. Kyanol yielded a brilliant blue when treated with chloride of lime, and upon further investigation was proved to be identical with Anil.

In 1843 August Wilhelm Hofmann, a German professor in England, isolated Benzol from coal tar. But because England was importing vegetable dyes from her colonies, so little interest was shown in Hofmann's chemical researches that he reluctantly went back to Germany.

After Hofmann left England, one of his pupils, William Henry Perkin, discovered a method of producing purple from Anil and called it Mauveine. This led to the development of the vat dyes of today. Perkins' greatness lay not only in his brilliant discovery—but also in his realization of its great commercial possibilities. The same happy combination of gifted research and practical application makes the contributions of today's textile chemists to the industry so varied and so valuable.

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attempted remedies have so far barely slacked its pace. Most acute has been the manpower problem, with a net loss of more than 62,000 employees from the end of 1942 to the second quarter of 1944, according to a recent statement of the War Production Board. Although the industry has been declared essential and put on a 48-hour week, these actions have failed to restore the third shifts which contributed so materially to the 1942 production record. Wherever increases in overtime operations have materialized, the added production usually must carry a burden of higher manufacturing costs. Inexperienced replacements for the trained workers who have joined the armed forces, transferred to munition plants or returned to the farm have meant lowered efficiency. Further discouragement of productivity has resulted from a combination of high labor turnover and increased absenteeism. Only in the tire fabrics division, when its urgency began to affect the supply of combat equipment, has there been established a strong priority claim on manpower under the rulings of the War Manpower Commission.

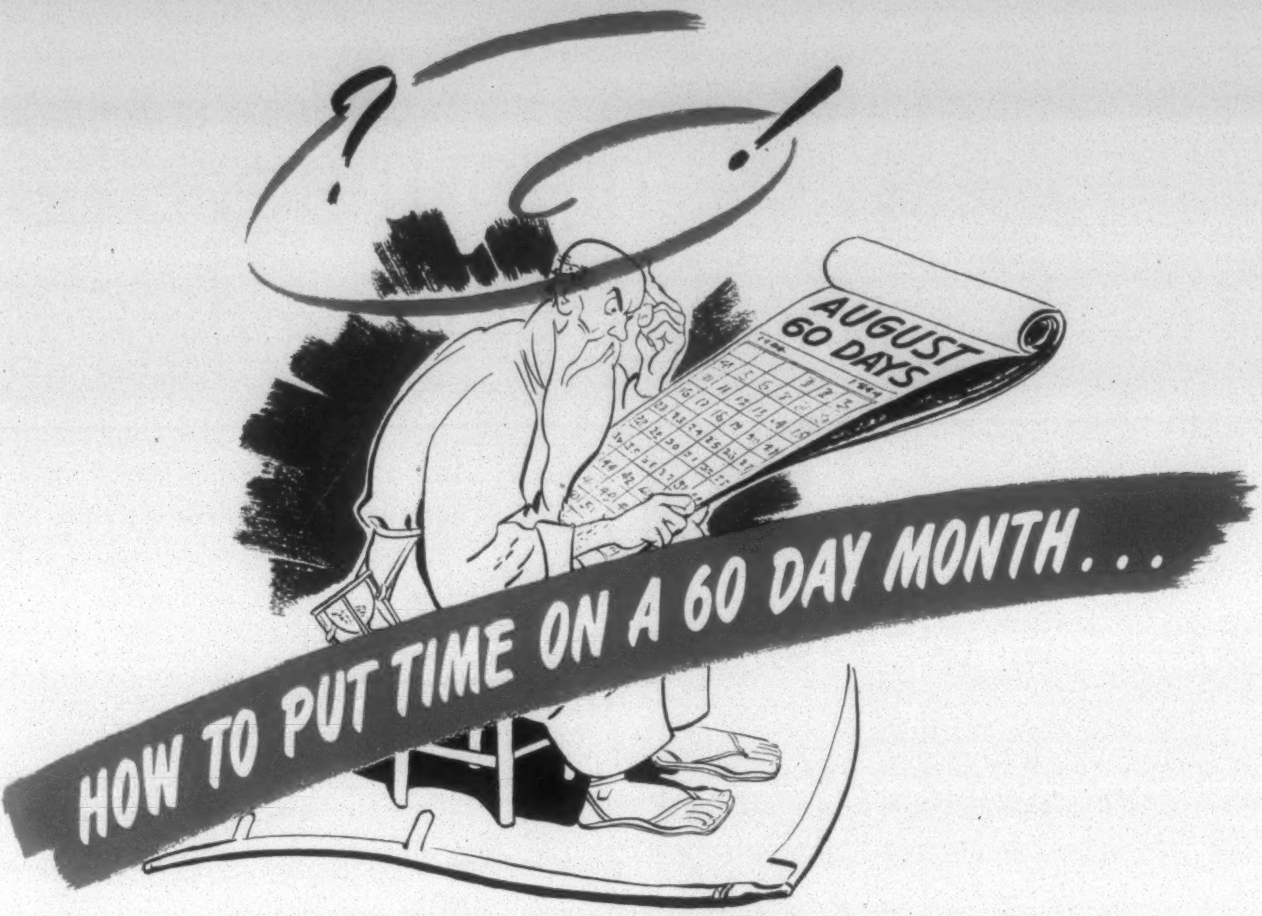
Another potent impediment to production since the latter part of 1943 has been the failure of OPA to rectify inequitable price ceilings or to appraise properly the practical and psychological effect on the industry of ill-advised price policies. Price ceilings on cotton goods were generally imposed in May, 1942, at the peak of operations and production. Since then, raw cotton prices have risen to the highest levels in 16 years and, according to the Cotton-Textile Institute, unit labor costs have mounted 42 per cent. In many sections of the industry, the resulting squeeze on manufacturing margins has already caused distress, especially to marginal plants. OPA's initial remedy of underwriting costs, or in some instances costs plus two per cent, has not merited support in any quarter. Neither has the theory of pooled earnings whose concept is foreign to industry practice. Under the Stabilization Extension Act of 1944 there is revived encouragement that price levels will be altered to reflect 1944 costs rather than the historical figures of 1942. Should these changes not be delayed too long the general effect on production is bound to be helpful although it seems likely that any profit gauge will be set on the standard of a competitive buyers' market, with returns not commensurate to the risks involved.

In spite of serious obstacles both at the mills and in the markets, the number of hours run per average active spindle in 1943 was substantially higher than in 1941 and far above any peacetime experience. According to our calculations, the resulting volume was 11,663,506,000 square yards. Of this total, it is estimated that approximately five per cent was exported, chiefly to accord with government sanctions. With only minor yardage of importations, the residue available for domestic consumption was 11,128,506,000 square yards, or a per capita figure slightly above 1941. From the present outlook, in the light of six months' performance, 1944 total production can hardly be expected to reach above 11,000,000,000 square yards and most probably will be short of that figure unless the extraordinary efforts of plant management and workers—

(Continued on Page 44)

TEN YEARS OF COTTON TEXTILES—Data assembled by the Association of Cotton Textile Merchants of New York from Bureau of the Census reports and information obtained through the courtesy of machinery manufacturers. Cloth production for the non-census or even years prior to 1941 has been estimated to correspond to spindle hour activity during the preceding years. Cloth production for 1941 the War Production Board estimate of June 29, 1942, which is the basis for subsequent calculations.

	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943
EQUIPMENT										* Partly Estimated
Spindles in place at beginning of year	30,938,340	30,889,484	29,253,444	27,700,194	26,704,476	25,986,620	24,943,302	24,532,146	24,146,130	23,845,746
Increase or decrease from preceding year	503,834	48,856	1,636,040	1,553,250	995,718	717,856	1,043,318	411,156	386,016	300,384
New installation, additions and replacements.........	529,840	214,874	469,316	772,724	178,280	349,416	414,974	449,848	210,456	7,752
OPERATION										
Spindles active at any time during year ending July 31st	27,742,462	26,700,946	24,664,428	25,419,110	24,774,004	23,731,050	23,585,938	23,389,454	23,607,508	23,429,252
Spindles idle during same period	3,195,878	4,188,538	4,589,016	2,281,084	1,930,472	2,255,570	1,357,364	1,142,692	538,622	416,494
Average number of active spindles based on twelve monthly reports. . ..	25,119,435	23,421,150	23,373,147	24,079,936	22,042,442	22,306,734	22,410,483	22,945,121	23,037,332	22,738,741
Intermittent spindles *(being the difference between average active spindles and those active at some time during year)*	2,623,027	3,279,796	1,291,281	1,339,174	2,731,562	1,424,316	1,175,455	444,333	570,176	690,511
Percentage relation of average active spindles to spindles in place.... ...	81.19%	75.82%	79.9%	86.93%	82.54%	85.84%	89.85%	93.53%	95.41%	95.36%
Spindle hours run.	75,711,412,882	76,017,361,934	91,773,252,676	95,591,131,816	75,925,187,178	92,559,108,308	98,183,985,391	121,772,205,730	133,492,717,810	125,380,341,006
Hours run per average active spindle.	3,014	3,246	3,926	3,970	3,444	4,149	4,381	5,307	5,794	5,514
MARKET										
Production in square yards	6,878,579,000	7,135,276,000	8,613,837,000	9,445,914,000	7,502,168,000	9,044,979,000	9,593,557,000	11,327,903,000	12,418,160,000	11,663,506,000
Exports in square yards..	226,306,000	186,565,000	200,501,000	236,251,000	319,634,000	367,466,000	357,925,000	586,739,000	* 450,000,000	* 550,000,000
Imports in square yards...	41,533,000	63,674,000	114,195,000	147,320,000	58,282,000	111,817,000	84,344,000	* 75,000,000	* 25,000,000	* 15,000,000
Available for domestic consumption	6,693,806,000	7,012,385,000	8,527,531,000	9,356,983,000	7,240,816,000	8,789,330,000	9,319,976,000	10,816,164,000	11,993,160,000	11,128,506,000
Population at July 1st....	126,626,000	127,521,000	128,429,000	129,257,000	130,215,000	131,200,000	131,970,000	133,203,000	134,656,000	* 136,500,000
Available for per capita consumption in square yards.	52.86	54.99	66.40	72.39	55.61	67.00	70.63	81.20	89.06	81.53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PERSONAL NEWS

J. L. Brannon, formerly of Laurens, S. C., is now assistant superintendent at Ranlo (N. C.) Mfg. Co.

U. S. Crenshaw has resigned as overseer of carding and spinning at the Eureka Plant of Springs Cotton Mills, Chester, S. C., to become superintendent of the Harden Mfg. Co. Mill No. Two at Rock Hill, S. C.

Luther H. Hodges, the vice-president in charge of manufacturing for Marshall Field & Co., has been appointed price executive of the primary products branch of the Office of Price Administration's consumer goods division. . . . Frank L. Walton, vice-president of Catlin Farish Co., Inc., and formerly director of the War Production Board's textile, clothing and leather bureau, has been appointed a special consultant on textiles to the OPA consumer goods division.

J. B. Dixon, formerly of Joan Plush Mills at Woonsocket, R. I., has become superintendent of weaving for Oconee Rug Co. at Athens, Ga.

A. Morton Cooper, left, has been appointed manager of the general mill section in the industrial department of Westinghouse Electric and Mfg. Co. The section he now heads deals largely with the textile industry. His association with the company was begun in 1920 and he has been in the general mills section since 1942. He holds diplomas in business administration and electrical engineering.

P. D. Nanney has been named designer for Stonecutter Mills Co. at Spindale, N. C., filling a position left vacant by Hugh Armstrong, who has joined the Atlanta, Ga., staff of Steel Heddle Mfg. Co.

J. M. Withrow, assistant director of the cotton and synthetic textile division and acting chief of the cotton fabric branch of the War Production Board's textile, clothing and leather bureau, has resigned effective Sept. 1. . . . . John W. Boyer, chief of the alcohol and solvents branch of the WPB chemicals bureau, has resigned to establish himself in Washington as a consultant to the chemical industry. Prior to his WPB affiliation Mr. Boyer had been connected with American Cyanamid, Mathieson, Monsanto, Calco and Solvay during a 20-year period. He has been succeeded in the government post by Frank E. Bennett, who has had 23 years of experience in the chemical industry.

L. Dillard Owen has been promoted from overseer of spinning to superintendent of the preparatory departments at Lincoln Mills, Huntsville, Ala.

K. R. Van Tassel, left, has been named industrial control division manager of General Electric Co., succeeding George R. Prout, now with another division of the company. He joined General Electric after graduating from Massachusetts Institute of Technology in 1925. Elliott Harrington has been named sales manager of the company's new integral-horsepower, alternating-current motor section, and J. T. Farrell has been appointed sales manager of a corresponding section handling direct-current motors. D. A. Yates will be assistant to both Mr. Harrington and Mr. Farrell.

George W. Baity, general engineer for Proximity Mfg. Co. at Greensboro, N. C., was elected president of the Raleigh section of the American Society of Mechanical Engineers at the group's recent summer meeting.

A. L. Butler, Jr., son of the vice-president of Chatham Mfg. Co. at Elkin, N. C., has been promoted from captain to the rank of major in the Army Quartermaster Corps. . . . William Dribben, formerly of Cone Export & Commission Co. and now overseas in Army service, has been promoted to lieutenant-colonel. . . . Fred L. Smyre, Jr., president and treasurer of both A. M. Smyre Mfg. Co. at Ranlo, N. C., and Moroweb Cotton Mill Co. at Dallas, N. C., has been commissioned a lieutenant, junior grade, in the supply corps, United States Naval Reserve. He is now taking indoctrination training at Babson Park, Mass., prior to assignment to regular duty. . . . L. J. Ball, secretary of Pepperton Cotton Mills at Jackson, Ga., is now a captain in the United States Army stationed in North Africa. . . . Thomas A. Paxton, vice-president of Southern Textile Machinery Co. at Paducah. Ky., has been commissioned an ensign in the Naval Reserve and is stationed at the Portsmouth (N. H.) Naval Base as assistant supply officer. . . . First Lieut. Charles A. McKinney, Army Air Forces pilot, now missing in action, has been awarded the Distinguished Flying Cross. He is the son of Thomas H. McKinney, now in retirement in Florida, who was formerly vice-president and general manager of American Yarn & Processing Co at Mt. Holly, N. C., and who has served as chief of WPB's cotton yarn division in the textile, clothing and leather bureau.

Orville S. Smith, for the past 15 years with the maintenance department of Western Electric Co. at Baltimore, Md., has become production manager for Terrell Machine Co. at Charlotte.

W. M. Pittendreigh, formerly superintendent of research for Judson Mills at Greenville, S. C., has been appointed superintendent of Laurens (S. C.) Cotton Mills.

A. N. McFarlane has been appointed associate director and S. M. Cantor has been appointed assistant director of research for Corn Products Refining Co. Dr. William Earle Brinker, Jr., has been made director of engineering in the company's chemical division.

Robert W. Philip, president and executive director of the Callaway Institute, Inc., at LaGrange, Ga., recently underwent an operation in an Atlanta hospital. He is reported to be recovering satisfactorily.

L. C. Leatherland, formerly head of the viscose department at Sylvania Industrial Corp., Fredericksburg, Va., has been appointed a research associate by the Institute of Textile Technology at Charlottesville, Va. His first task at the institute will be to assemble the necessary equipment for research. This activity will be reported to members as it progresses, and any benefits resulting from projects will belong to the membership.

Miss Kathryn Day has joined the staff of Hazard Advertising Co., New York, as fashion and merchandising consultant on textile and related accounts. She was previously engaged in work for the Cotton-Textile Institute, Inc., the United States Finishing Co., the Rayon Institute and the Durene Association of America. She is a member of the American Association of Textile Technologists and also of the Fashion Group.

Leon Brick, right, became general sales manager for Onyx Oil & Chemical Co., Jersey City, N. J., Aug. 1. He has been with the company for the past 18 years, spending much of this period as technical and sales representative in New York, Pennsylvania and the South. During the past seven years Mr. Brick has been located in the main offices of the company in the capacity of assistant general sales manager. He is a graduate of the Philadelphia Textile Institute.

—(Continued on Page 39)

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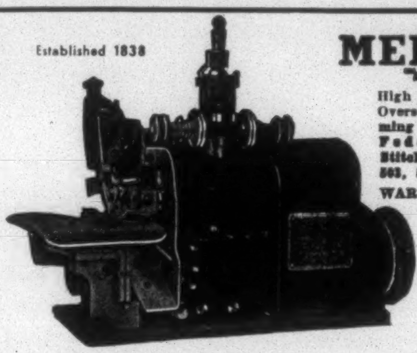

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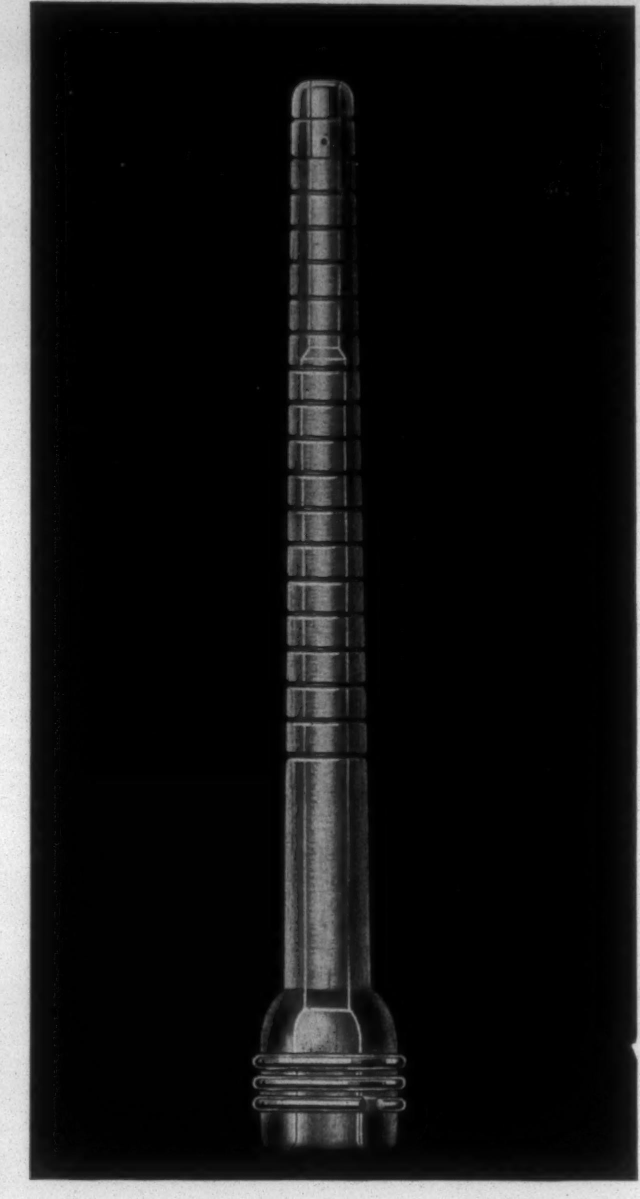

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MILL NEWS

SENECA, S. C.—The Lonsdale Co. of Rhode Island has announced plans to install 120 "X-2" high-speed Draper looms in its Seneca plant. Delivery and installation will take place this fall.

HIGH POINT, N. C.—High Point Weaving Co., a unit of Burlington Mills Corp., has compiled more than a million man hours since September, 1943, without an accident, according to C. M. Garrison, office manager. The plant employees received commendations from E. H. Wilkins, director of safety for Burlington Mills; W. I. Spencer, plant manager; Superintendents L. G. Easter and R. L. Phillips, and Cameron Deans, chairman of the safety committee.

ROBBINS, N. C.—Through contributions of Robbins Cloth Mills, Inc., the 1944-45 Robbins tax rate has been cut from one dollar to 50 cents. The reduction was made possible when the company gave the town $26,000 worth of water and sewer bonds. To buy them, the mill had to pay a premium of $520. Thus the town's bonded indebtedness was cut from $99,000 to $73,000. The bonds retired in this way were those of earliest maturity; therefore, as things now stand, the town has no payments due on its bonds until 1950. Interest payments on the bonds fall due in April and October. When one was due late last April the mill presented the town commissioners with $1,460 in bond coupons marked "paid in full." Furthermore, assurance was given that October's interest charges would be similarly cancelled.

HURT, VA.—Officials of Pacific Mills at Boston, Mass., have arranged the purchase of large tract of land in the village of Hurt. The land, embracing some 600 acres, is not far from Altavista. The company states that it has no immediate plans for using the property, but that it has been bought for possible post-war projects along the lines indicated by new processes and circumstances now developing in the textile industry.

A WHITE STAR FOR ORANGE PLANT

The Orange, Va., plant of American Silk Mills has been notified that for the third time it has been awarded the Army-Navy "E" for excellence in war production. This means that a second star will be added to the plant's pennant, presented initially in April of last year.

R. D. Cole Mfg. Co. of Newnan, Ga., has just received its second gold star from the Maritime Commission as recognition of its work in production for the Victory Fleet.

THOMASTON, GA.—Work has been started on construction of a trailer site to house 50 Martha Mills essential war working families. Fifty trailers are being furnished by the Federal Government. The work is scheduled to be finished in 30 to 45 days.

CRAMERTON, N. C.—A community cannery built and equipped by Cramerton Mills, Inc., is now in full use by families of workers in the various company plants. Since the middle of June some 8,000 cans of produce have been put up. No charge is made for use of the cannery, open to anyone connected with Cramerton Mills. Patrons provide their own fruits and vegetables, much of which comes from local gardens, and buy cans at retail prices from the cannery. Altogether, around 300 families have used the facilities.

Production Trouble-Shooters Are Appointed

Four textile experts have been appointed to the Southeastern staff of the War Production Board for the purpose of assisting mills in solving technical problems which may be slowing down production of important items. The new appointees include J. C. Edwards, formerly superintendent of Martha Mills at Thomaston, Ga., who will cover the state of Georgia; J. T. Hilton, former professor of textile engineering at North Carolina State College, Raleigh, with headquarters in Raleigh; J. Barbee, Knoxville, Tenn., district, and L. O. Bunton, former mill manager, who will cover South Carolina, with headquarters in Greenville. Appointments for the Alabama and Charlotte WPB district territories will be made as soon as qualified personnel can be found.

Southeastern Personnel Conference Is Set

The fourth annual Southeastern Industrial Personnel Conference will be held this year Sept. 11-13, again at Duke University, Durham, N. C. Frank T. de Vyver, secretary of the conference committee, has announced that a full program is being arranged and that dormitory space will again be provided by the university. The first session will open the evening of Sept. 11, and the meeting will end at noon Sept. 13.

N. C. Safety Contest Closes Aug. 26

The annual statewide textile safety contest sponsored by the North Carolina Unemployment Compensation Commission will close Aug. 26, according to an announcement by officials. More reports have been sent in by textile plants than in any previous contest, but compilation of the figures will have to be delayed until several tardy companies have entered material relative to their accident and safety records.

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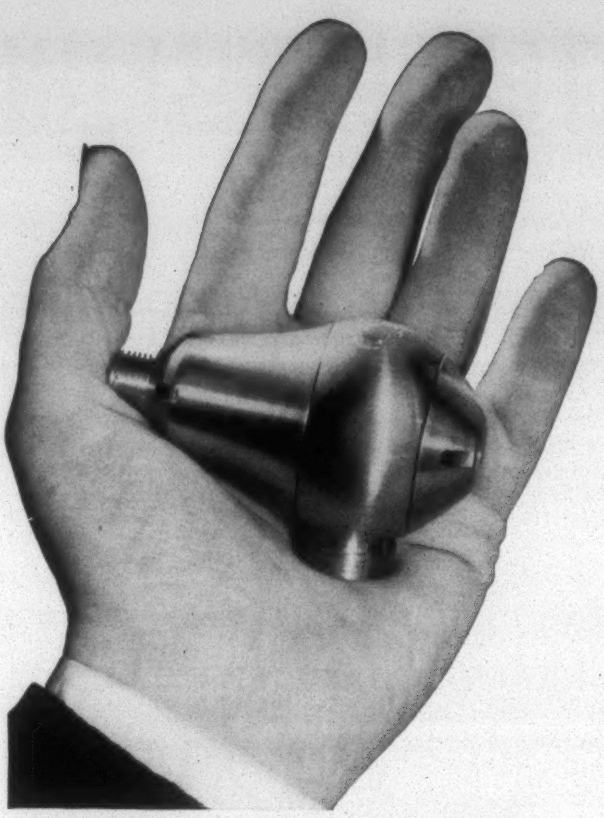

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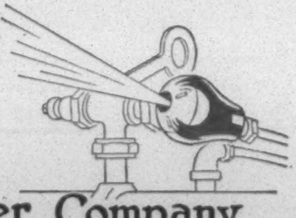

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Contributions on subjects pertaining to textile manufacturing and distribution are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

Modern Testing Laboratory

Soon after Malcolm E. Campbell was named dean of the textile school at North Carolina State College, Raleigh, N. C., which selection was made possible by a salary supplement provided by the North Carolina Textile Foundation, Inc., he reported that the testing laboratory at the textile school was very poorly equipped and was entirely inadequate.

When this was called to the attention of Governor J. Melville Broughton, he made the statement that, "if the textile manufacturers were willing to provide the '*talent*' for the textile school," the State of North Carolina should be willing to provide the *equipment* and he induced the Council of State to make a special appropriation of $15,000 for the equipment of a modern textile testing laboratory.

When we were in Raleigh a few days ago we visited the testing laboratory and were surprised to see that much of the equipment had already been secured and installed.

They have not yet been able to secure the air conditioning and temperature controlling equipment but they have been purchased and will be such as to provide separate controls for the three rooms which are to be used for the laboratory.

Most of the machines to be used for textile testing have arrived and there are some machines of which we had had no previous knowledge and several contain very recent improvements.

Many contained pin point or pencil recording devices and some are operated by motors and devices for multiple automatic repeats.

The Mount Vernon-Woodberry Mills, Inc., of Baltimore, Md., hearing of the development to be made at the textile school, loaned them for an indefinite period a Moscrop Multiple Break machine which operates automatically with six bobbins of yarns and records the results upon a paper tape.

Elliott Grover, former superintendent of yarn manufacturing at the Manville-Jenckes Mills, Pawtucket, R. I., who recently joined the textile school staff, has greatly improved the operation of the Moscrop machine by inventing a two-speed attachment.

As now operated the machine moves at a fast speed, except when the yarn is to be put under tension for breaking and then has a slow but positive movement.

A small machine, which greatly interested us, was designed for determining the breaking strength of cotton fibers.

Cotton buyers pull staple and then often determine whether it is weak or strong cotton by catching the end between thumbs and first fingers of their two hands and breaking the fibers.

While that system will disclose unusual weakness in the cotton, an Arizona cotton dealer, realizing that it was not accurate, invented a small machine which is very dependable. It is known as the Pressley Cotton Fiber Strength Tester.

The ends of the fibers are clamped in small jaws and a sliding weight cause the breaks. It is six to eight times as rapid as any other system and is also suitable for testing rayon fibers.

Dean Campbell says that it takes less than an hour for a boy or girl to learn to operate the machine and that the results are remarkably accurate.

One cotton manufacturer, after making a few breaks upon the machine, insisted upon Dean Campbell wiring the manufacturers to ship one to his mill.

The services of the new members of the staff of the textile school at North Carolina State College are available to mills in North Carolina, Virginia and Tennessee without charge. They do not refuse to do testing for mills in other states and when we were in Raleigh the school had quite an assignment from an Alabama mill.

The fact that a company has not made a contribution to the North Carolina Textile Foundation, Inc., which has made the new set-up possible, should not keep it from using the services of the staff or the testing laboratory, as it is the desire of the textile school to render all possible service to all textile mills.

Officials and members of the operating staff of textile plants will find it well worth while to visit the textile school, examine the new testing laboratory and equipment of the improved textile school and discover what service can be rendered to them.

There will probably be severe competition after the war ends and this is a good time to discover what checks can be made upon raw materials and finished products.

The Philadelphia Strike

While we deplore the recent transportation strike at Philadelphia, Pa., which, by making it difficult for war workers to reach their work, interrupted the production of war materials, we are not unmindful of the fact that it resulted from the Fair Employment Practices Committee at Washington, D. C., ordering the employment of Negroes as bus drivers.

The F.E.P.C. order read:

> The committee directs that the Philadelphia Rapid Transit Employees Union in the interest of the war effort shall not interpret any section or provision of its contract with the Philadelphia Transportation Co. so as to prohibit, limit or in any manner interfere with the employment or upgrading by the company of qualified Negroes in or to positions as street car or motor coach operators or conductors, motormen, guards, platform attendants and station cashiers of the company's elevated or subway lines, or in or to any other job classification with the company not presently held by Negroes.

The F.E.P.C. undertook to abolish instanter a long-standing custom and to abrogate certain clearly implied and well understood terms of a contract between the transit company and the employees' union. It ordered the employees and the employer to interpret their agreement to suit the social and political concepts of the F.E.P.C. or certain persons interested in promoting social equality between Negroes and whites.

As the result of the order Philadelphia's service was paralyzed. Business was stagnated. A large proportion of Philadelphia's 600,000 war workers was unable to travel to work. The output of such essentials for our soldiers on the battlefronts as heavy artillery, military trucks, bombs, ammunition and radar was seriously affected. A war production center, ranking second in the entire country, was thrown into confusion. Racial ill will was fomented, and there were outbreaks which bordered upon riot.

The union-company contract read:

> Except as herein specifically covenanted, all rules, regulations and customs bearing on employer-employee relationship shall continue in full force and effect until changed by agreement between the parties.

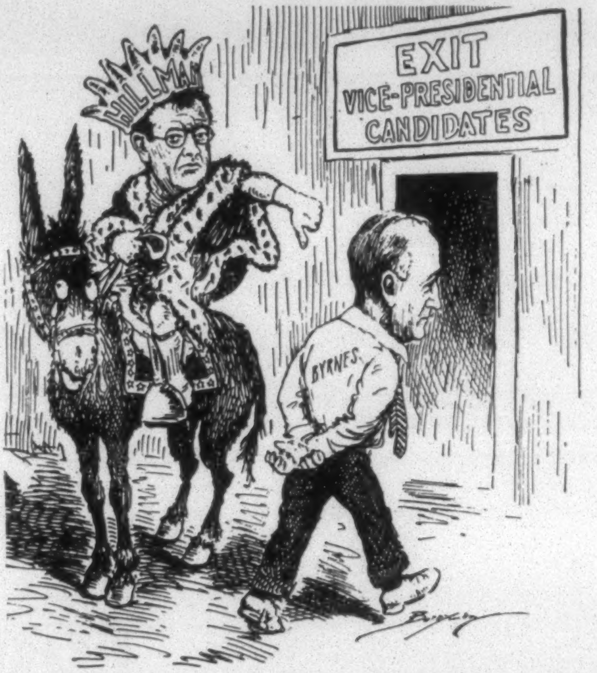
The F.E.P.C. ordered the union to abrogate the terms of their contract and to employ Negroes as bus drivers, and there can be little doubt that the principal purpose of the order was to promote the equality of Negroes with whites.

When John L. Lewis shut down the coal mines, and disrupted production of war materials at a very critical time, there was a demand that striking miners who were eligible for the draft be ordered to report to draft boards for Army service.

That demand went absolutely unheeded but during the Philadelphia transportation strike it was announced that strikers eligible for Army service would be required to report to their draft boards if they did not return to their work and accept the "Negro equality" order of the F.E.P.C.

There can be little doubt that the threat was issued more for the purpose of forcing the strikers to work with Negroes than for the restoration of the production of war goods in the Philadelphia area.

The New Dealers never seem to hesitate to use governmental force to promote their own ideas and plans.



—Berryman in the Washington Evening Star.

Sidney Hillman's Orders

A man who was a very prominent figure in the recent Democratic Convention at Chicago tells us that he knows it to be a fact that Sidney Hillman of the CIO went to Democratic Chairman Hannegan and told him that he (Hillman) would not stand for a Southern man being named as the vice-presidential candidate.

Under Sidney Hillman's orders James Byrnes of South Carolina was dropped like a hot potato.

The New Dealers and the CIO bosses give only one assignment to the South and that is to cast electoral votes for the candidates which New Dealers and the CIO select.

They wonder how Southern Democrats have the nerve to suggest that a Southern man be named for any high office.

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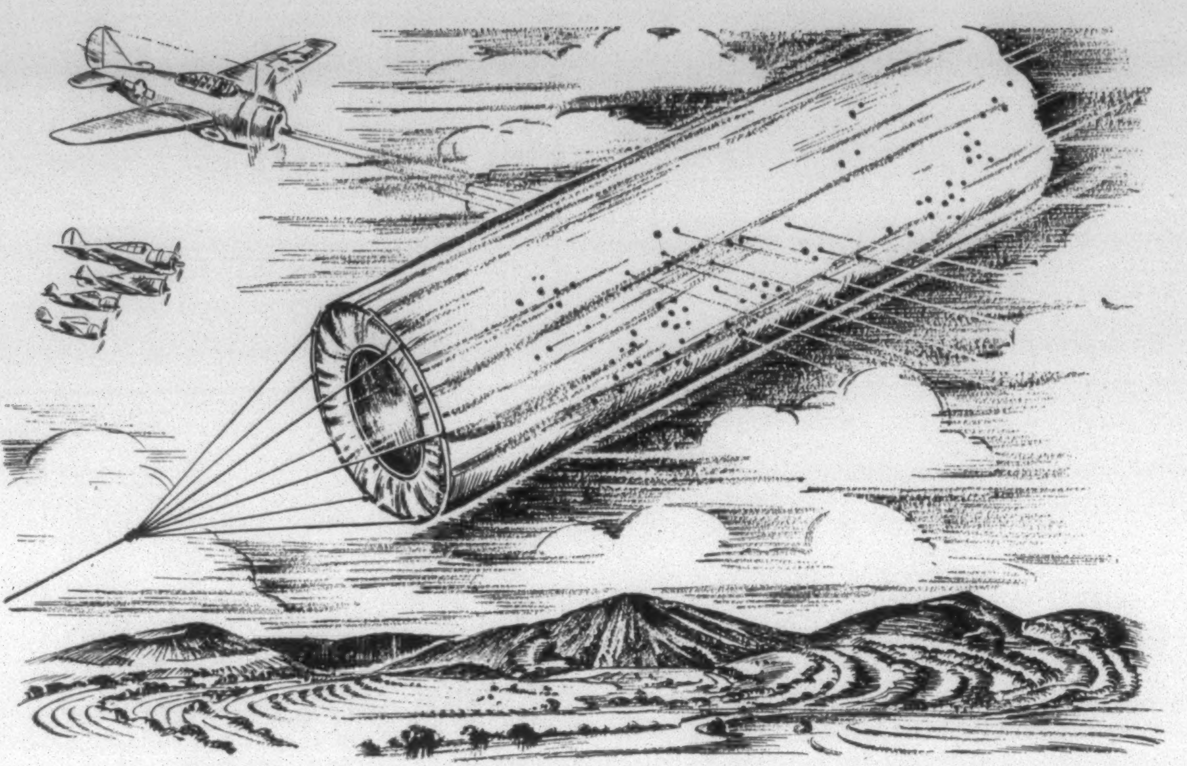
with an absenTee



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DYEING AND FINISHING

Notes on Dyes and Dyeing

By GEORGE BROUN

Practical Application of Direct Dyestuffs — Part Five

Part Four of this series dealt briefly with the practical application of direct and direct and developed colors on yarns dyed on package and beam dyeing machines. This article will deal with the dyeing of these colors on the different staple fibers (cotton, viscose rayon, etc.) on raw stock dyeing machines.

THERE were two types of dyeing machines built to dye the staple cotton fiber instead of by the centuries-old procedure of hand poling which is still in use in many sections of the textile manufacturing world. These two types were known as the circulating and vacuum raw dyeing machines. The vacuum type gained its name from its type of construction and condition of the staple fiber stock during processing and dyeing, and as the makers of this original designed machine used this name it has "stuck" in the trade. Now many makes of machines are classified as vacuum types although not manufactured by the original designer and maker. Circulating machines were built on the principle of cylindrical laundry washing machines, with the raw staple fiber packed in compartments. The raw stock packed compartments were passed through the dye liquor by revolving or oscillating the cylinder in regular motion. The circulating machine became outmoded due (1) to higher dyeing and processing costs caused by greater liquor ratio to fiber dyed than on newer vacuum types, and (2) tangling and matting of fibers through excessive mechanical manipulation of the raw fibers by forcing them through the dye liquor.

In the vacuum raw stock type of machines, the raw fibers are packed evenly and wet down in the large cylinder and then the dye liquor is forced through these uniformly packed fibers, thus freeing them from excessive mechanical action during the wet processing operation. In a majority of the vacuum type machines the liquor is forced one way contrasted to the two ways (outside-in and inside-out) of the pressure package and beam dyeing machines. These vacuum machines are large cylindrical tanks constructed of cast iron, monel metal or stainless steel; these are false bottom gratings to hold packed fibers in place and prevent loose wads falling into water, steam and drain lines thereby clogging up the circulating system. Some of the newer vacuum models have a partial two-day pressure dyeing system by which the dye liquor is forced through the top to bottom and in at the sides of tank. Another innovation is the underslung heavy dropleaf false top hung beneath the top and this false top gradually drops and presses the packed staple fiber down as it is wet out, thus insuring firmly held raw stock during the dyeing operations. Quite a bit of credit should be given this false top addition, as it has helped to give raw stock dyeing a new lease on life in the dyeing of synthetic fibers as well as dyeing of fibers by practically all dyestuffs used for cellulosic fibers.

An expansion or overflow tank holds the processing and dye liquors which are prepared in this tank and then pumped into machine which is filled with water and heated by separate steam lines on newer type of machines. On completion of the dyeing, the dyed stock is washed, then the excess water is removed by "air blowing" or suction. The false bottom acts as support in pulling the entire packed lot of dyed stock out of machine through an electric or hand hoist where the stock is then hydroextracted and dried on special raw stock dryers.

The dyeing ratio of fiber stock to dye liquor varies on the different types of vacuum machines but the increasing tendency is to reduce this ratio one to eight and down to 1:4.5 especially where dyers pack over the rated dyeing capacity of the machine. On raw cotton staple that is not "export" compressed and has been run through an opener and the same is true of viscose rayon staple, the dyeing liquor ratio can be reduced to a minimum. The better equipped raw stock dyeing plants are now handling ten to 20 per cent more cotton staple on these newer model machines than rated capacities and on viscose rayon staple they generally handle about rated capacity or ten per cent under when dyeing with direct and developed colors.

Preparation and Dyeing of Raw Stock

The greatly improved synthetic detergents possessing both scouring and wetting out action plus the alkali and acid resistant penetrants have greatly simplified and speeded up raw stock dyeing of cotton and viscose staple fiber. One method for cotton (with formulas based on weight of staple) is as follows: After machine has been packed, enter water, raise to 100° F. and add one per cent synthetic detergent, raise to 140° F., run 20 minutes, add one per cent penetrant, run ten minutes, add dissolved direct color over ten minutes, run ten minutes at 140° F., then raise to boil and run 20 minutes, add salt and run 30 to 60 minutes according to depth of shade before finishing off. The drain valve is opened partially and the dyed stock is given a running cold wash until clear, then five to 15 per cent salt is added to final rinse water to help condition cotton after it is dried and baled, ready for the manufacturing of yarn.

For "export" or highly compressed cotton use two to three per cent synthetic detergent, one per cent mild alkali. Enter at 100° F., raise to boil and run 40 minutes, cool by running cold wash until 120° F., then enter two per cent penetrant. Run ten minutes and add dyestuff solution slowly, run for 20 minutes at 120° F., then raise slowly to a boil and run 40 minutes before adding salt slowly over 20 minutes, then boil 40 to 80 minutes according to depth of shade before dropping bath, cold washing and finishing off. Precaution on handling highly compressed and dirty cotton—try and have them run through the opener; this helps to clean and equalizes the fiber before it is packed. If this type of cotton cannot be run through opener but must be dyed as received in bale, then have operatives open bales and pull apart without too much time lost, pack carefully and add extra amount of synthetic detergent for its cleansing action on fiber.

The use of synthetic detergents such as Nacconol, Igepon and Gardinol, as well as many others, have proved of great aid in obtaining cleaner and better scoured staple fiber. In place of the older type soluble or sulfonated oils, the synthetic acid and alkali resistant penetrants help to level up and penetrate the packed raw stock and prevent channeling which was a common occurrence before their introduction. These agents also work under hard water conditions where soluble oils have a tendency to make the fibers sticky due to the action of the lime and magnesium salts in the hard water in making lime soaps out of the soluble oils and the natural waxes (pectins) removed from cotton during scouring and dyeing. The new synthetic detergents, fatty alcohols and penetrants are resistant to the hard water conditions and therefore help the dyed cotton fiber to retain their natural softness, free from sticky feel that would interfere with the manufacture of the yarn. The use of these new synthetic detergents and penetrants enables a dyer to carry through the diazotizing and developing of a color without fear of getting a sticky and uneven offshade dyed lot due to the acid and alkaline resistant penetrants used in place of the sulfonated or soluble oils which tend to curdle out of solution if any remains on the fiber during the acid diazotizing bath.

Viscose Rayon Staple

Viscose rayon staple fiber is usually oiled during preparation and for this reason the synthetic detergents have been found very useful, as these preparation compounds must be entirely removed if the viscose staple is to be dyed level and penetrated thoroughly. The same holds true for dyeing of other synthetic fibers such as casein fiber on raw stock machines. As the viscose staple fibers tend to swell and mat if packed as closely as cotton, most dyers find it best to dye about 20 per cent less viscose staple than cotton on the better constructed raw stock machines (vacuum type).

On the coarser staple, use one per cent synthetic detergent; while on finer staple, use two per cent synthetic detergent. Start at 120° F., raise to 180° F., run 30 minutes, wash over until clear, then give fresh bath at 120° F., adding two per cent penetrant. If penetrant does not possess a leveling or retarding action on direct colors, add two per cent cellulose sulfite waste liquor to bath. Run this ten minutes before adding dissolved color, after color is added, run at 120° F. for 20 minutes, then raise to a light boil, running 20 minutes before salting in four parts with steam cut off. After salting, run 20 to 40 minutes before washing and finishing off. The amount of salt used on viscose staple may be omitted or cut down in half that used for conditioning dyed cotton due to the quicker take-up of hygroscopic moisture by viscose rayon than cotton.

Another method is to enter two per cent synthetic detergent at 120° F., raise to 140° F., run 40 minutes, add two per cent penetrant and two per cent retarding agent to bath, run for ten minutes before dissolved color is added slowly, temperature raised to 180 to 200° F., running 20 minutes, then salted and running 20 to 40 minutes before washing and finishing up.

Suggestions on Preventing Channeling

Some staple viscose rayons tend to scour unevenly when only synthetic detergents are used but it has been observed that it is best to add to the synthetic detergent bath a mild alkali, either a phosphate or borax, as this alkali swells the staple rayon fiber more uniformly than the harsh types like caustic soda or soda ash. Using this type of bath for scouring as outlined under the first method, or one-half to one per cent of these mild buffering types of alkali could be used in place of retarding agents as listed under the second method. The best results have been obtained with the first or slight variations of it.—*(To be continued.)*

Work of N. C. Foundation Is Described

Widespread publicity has been given recently to improvements being made in the textile school at North Carolina State College, Raleigh, through assistance of the North Carolina Textile Foundation, Inc. Wachovia Bank & Trust Co., which has headquarters at Winston-Salem and branches throughout North Carolina, devoted considerable space to the foundation and its work in a recent issue of the bank's organ, the *Wachovia*. Background for the foundation and plans for the textile school were also described in a recent issue of the *Slater News*, published by S. Slater & Sons of Slater, S. C. Emphasis upon research at the school was described by its dean, Malcolm E. Campbell, in a recent address before the Piedmont section of the American Association of Textile Chemists and Colorists. This speech was reprinted as an article in the July 1 issue of TEXTILE BULLETIN, the July 17 issue of *American Dyestuff Reporter* and the August issue of *Textile Research*, monthly publication of the Textile Research Institute, Inc., and the Textile Foundation.

Asbestos Textiles Program Is Discussed

Members of the War Production Board's asbestos textiles industry advisory committee met last month at Washington to consider the ability of producers of Navy asbestos cloth to use fibrous glass yarn, current and contemplated availability of Canadian and African fibers and requirements by the Navy for cable. No date was set for the next committee meeting.

PERSONALS

(Continued from Page 30)—

D. Harvey Hill, Jr., son of the late associate editor of TEXTILE BULLETIN, has been promoted by the Army to the rank of captain at Camp Gordon, Ga.

Capt. Charles S. Smart, Jr., has accepted a position as salesman for Saco-Lowell Shops, with headquarters at the company's Charlotte office. Captain Smart, a graduate of North Carolina State College, was recently given an honorable discharge from Army service. He is the son of the former superintendent of Locke Cotton Mills Co., Concord, N. C.

D. L. Howard, general manager of Brookford (N. C.) Mills, Aragon (Ga.) Mills and Floyd Mills at Rome, Ga., suffered serious injuries in a recent automobile accident which took place as he neared Brookford in returning from a business trip to Georgia. He received treatment in a Hickory, N. C., hospital.

Hugo Boeddinghaus has resigned as a consultant to the textile, clothing and leather bureau of the War Production Board to re-assume his duties as vice-president of American Felt Co. at Glenville, Conn., where he will be in charge of production and research.

Wentworth T. Durant, formerly an attorney for the Federal Trade Commission engaged in administration of the wool products labeling act, is now associated with Robert Ash in law practice at Washington, D. C. Their office will continue to specialize in Federal Trade Commission and Federal tax matters.

Roscoe H. Smith has been appointed manager of the newly-formed sales promotion department of Reliance Electric & Engineering Co., Cleveland, Ohio. He will be assisted by Kenneth F. Ertell, who has been named assistant advertising manager. Richard A. Geuder has assumed Mr. Smith's former responsibilities as manager of applied engineering.

Lewis M. Carter, former advertising manager of the industrial division of National Oil Products Co., Inc., Harrison, N. J., has been made company personnel manager. He has been succeeded as advertising manager by Miss Mary O'Connell.

Harry C. Smith of Deering Milliken & Co., Inc., was elected chairman of the print cloth marketing executives group of the Association of Cotton Textile Merchants of New York at a recent meeting. He succeeds Fred L. Keen of Iselin-Jefferson Co., who submitted his resignation to the group.

William H. Barnhardt, president and treasurer of Tryon (N. C.) Processing Co., William S. Coulter, treasurer of Burlington Mills Corp. at Greensboro, N. C., R. S. Dickson, president of American Yarn & Processing Co. at Mt. Holly, N. C., and J. C. Roberts, treasurer of Textiles, Inc., at Gastonia, N. C., have been appointed to the committee on new taxation of the National Association of Manufacturers.

R. L. Rollins, personnel director for A. E. Staley Mfg. Co. at Decatur, Ill., has been appointed a lieutenant (j.g.) in the Naval Reserve. William M. Jaske is now serving as acting director of personnel for the company.

J. H. Riley, who is in charge of the Chicago office of Turner, Halsey Co., has been elected a vice-president of the firm.

Capt. Mack E. Kittay has been appointed manager of the Southern division of National Starch Products, Inc. The veteran of two years' Army service in this war will operate from a district office at 1201 Commerce Avenue, Houston, Tex., and will coordinate company activity in the territory extending from Texas to Florida.

E. B. Blackstock is now superintendent of the recently organized Yarn Specialties Co. at Clover, S. C.

Harold Mahon has been appointed exclusive representative in the territory embracing North Carolina, Virginia and Tennessee east of Kingsport for Kearny (N. J.) Mfg. Co., Inc., manufacturer of conditioning liquids, finishing compounds, scouring agents and textile machinery. His address will be P. O. Box 345, Greensboro, N. C. William P. Russell (P. O. Box 778, Atlanta) has been named the company's representative in Alabama, Georgia west of Augusta and Tennessee west of Kingsport. Russell A. Singleton (218 Brown Building, Austin, Tex.) will represent the firm in Texas, Mississippi and Louisiana.

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POSITION WANTED by experienced Carder and Spinner who can overseer carding and spinning or either one; can superintend spinning mill; experienced in hosiery yarn manufacturing. I. C. S. trained in carding and spinning. Please state what you have to offer, as am interested in something with post-war future. Address "Box 507," care Textile Bulletin.

POSITION WANTED as Superintendent or Assistant Superintendent. Understand C. P. and K. P. yarns; can grade my own cotton, and figure my cost; can furnish best of references; would accept place as Maintenance Engineer, as have looked after the upkeep for several mills and know every machine and how to keep it in operation. Address "CP-19," care Textile Bulletin.

WANTED—Men with knowledge of erecting picking and opening machinery to work in essential industry. Good pay for right men. For details, write Troy Whitehead Machinery Co., P. O. Box 1245, Charlotte, N. C., or phone 3-9831.

WANTED—Position as superintendent of small yarn mill. Thoroughly experienced and can furnish A-1 references. Address "Box 92," care Textile Bulletin.

WANTED—Position as Weaving Overseer. Have 25 years' experience on plain sheetings, print goods; age 44; married, sober, reliable; draft classification 3-A. Employed at present, but want advancement. References furnished. Would like interview. Address "44," care Textile Bulletin.

WANTED—Job as Overseer of Spinning or Twisting. Brownell Twist, Ring Twist, and Polishing. Age 37; large family. Address "Box 13," care Textile Bulletin.

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Address "Box 70-E," care Textile Bulletin.

POSITION WANTED—As Overseer Carding or Spinning, or both, in large or medium size mill. 20 years' experience on both combed and carded yarns. Diploma in carding and spinning from North Carolina Vocational Textile School. Now employed. Best of references. Draft exempt. Address "R. E. N.," care Textile Bulletin.

WANTED—Job as Overseer of Weaving, plain or fancy. Can furnish good references as to character and ability. 38 years of age; 18 years' practical experience in weaving fancy cotton and rayon, also plain cotton and rayon. Seven years as overseer. Ready for immediate employment. Address "S. M. R.," care Textile Bulletin.

SITUATION WANTED — Bookkeeper, timekeeper, cost accountant; 16 years' experience; employed but desire change for personal reasons; 45 years old; small family. Best references. Address "Timekeeper," care Textile Bulletin.

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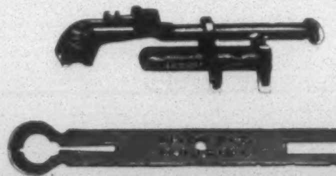

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Cotton Goods Market

Selling in the Worth Street market is generally expected to pick up as a result of the Office of Price Administration's announcement of increases to be made in mill ceiling prices for certain fabrics for an interim period pending a complete cost accounting. Although trading will most likely be stimulated by the increases, continuing heavy demands by the military for essential requirements, directives and other commitments are seen as constituting barriers to a widespread revival of free market activity.

Major producers of terry cloth products, huck and crash towels and corded napkins may make their contracts on an adjustable pricing basis, OPA announced Aug. 14. At the same time the adjustable pricing provision was revoked on denims, 3.60-yard sanforized fine yarn shirting chambray and bed linens, since these products have already been repriced to conform to requirements of the Stabilization Act.

Cotton goods selling houses in the Worth Street market, together with the mills South and East whose products they handle, have in the main met cloth requirements of the armed services together with a great part of civilian requirements actually needed in conduct of the war, during the past six weeks of ceiling price unsettlement. In many individual instances, selling houses in this period have sold or delivered as much or more goods to military procurement agencies than they did in July, 1943, even though production has declined substantially from a year ago.

The failure until very recently of the Office of Price Administration to provide new pricing, in the light of rising costs of the mills and the clear mandate of the revised price control act which became effective July 1, has not been permitted to stand in the way of fulfillment of military needs out of production available. Neither is it being permitted to stand in the way of indirect requirements which are real necessities of the war period.

This was disclosed Aug. 14 in a statement by W. Ray Bell, president of the Association of Cotton Textile Merchants of New York, in a report on results of the pledges, given to the military procurement agencies, following meetings in early July, that pricing delays of the Office of Price Administration would not be permitted to defer shipments of goods for direct Army use.

The War Production Board announced Aug. 10 that in the event of cutbacks or terminations of government textile contracts, WPB may, in the case of certain listed textile items, grant temporary exemptions from the restrictions of conservation and limitation orders governing production, sale, use or delivery of those items, to fill essential civilian requirements. The action was taken in amendments to Conservation Order M-328.

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Cotton Yarns Market

The War Production Board, in an effort to aid the delivery of mercerized cotton hosiery to the armed forces, has directed that spinners beginning Aug. 28 shall deliver a weekly poundage of two-ply combed yarns sufficient to meet requirements. The directive, persuant to Conservation Order M-328, requires that the yarn schedule be maintained for 16 consecutive weeks, with delivery being made on AA-2 orders bearing a certification that the yarn will be used for military contracts. These orders must be filled, in addition to all other rated orders for yarn, up to 100 per cent of a spinner's production.

The advance announcement by the Office of Price Administration Aug. 14 concerning prices of cotton yarns seemed to do little to loosen up movement in the Philadelphia market. The increases amount to approximately ten to 15 per cent in combed cotton yarns and 7½ per cent in carded numbers. The trade appears to have reacted favorably to the OPA announcement.

The United States Agriculture Department Aug. 8 forecast a 1944 cotton crop of 11,022,000 bales, 405,000 less than last year and 1,433,000 less than the 1933-1942 average. A report based on Aug. 1 crop conditions showed, however, that the yield per acre will be abnormally high.

The United States' cotton supply July 31 totaled 21,726,605 running bales, the Census Bureau has reported. The supply included a carryover from the previous year of 10,656,952 bales and the year ended with a carryover of 10,726,888 bales.

Cotton spindles active during July numbered 22,289,904 compared with 22,373,494 during June this year, and 22,667,376 during July last year. They included: in the cotton-growing states, 17,349,788 compared with 17,340,982 in June this year, and 17,383,990 in July last year.

Consumption in the cotton year ending July 31 totaled 9,942,070 bales of lint compared with 11,100,082 in the previous year.

The Census Bureau reported that cotton consumed during July totaled 724,167 bales of lint compared with 805,735 in June this year, and 839,868 in July last year.

Cotton consumed during July included: in the cotton-growing states, 644,984 compared with 708,149 in June this year, and 740,170 in July last year; and for the cotton year ending July 31, 737,813 bales against 9,639,957.

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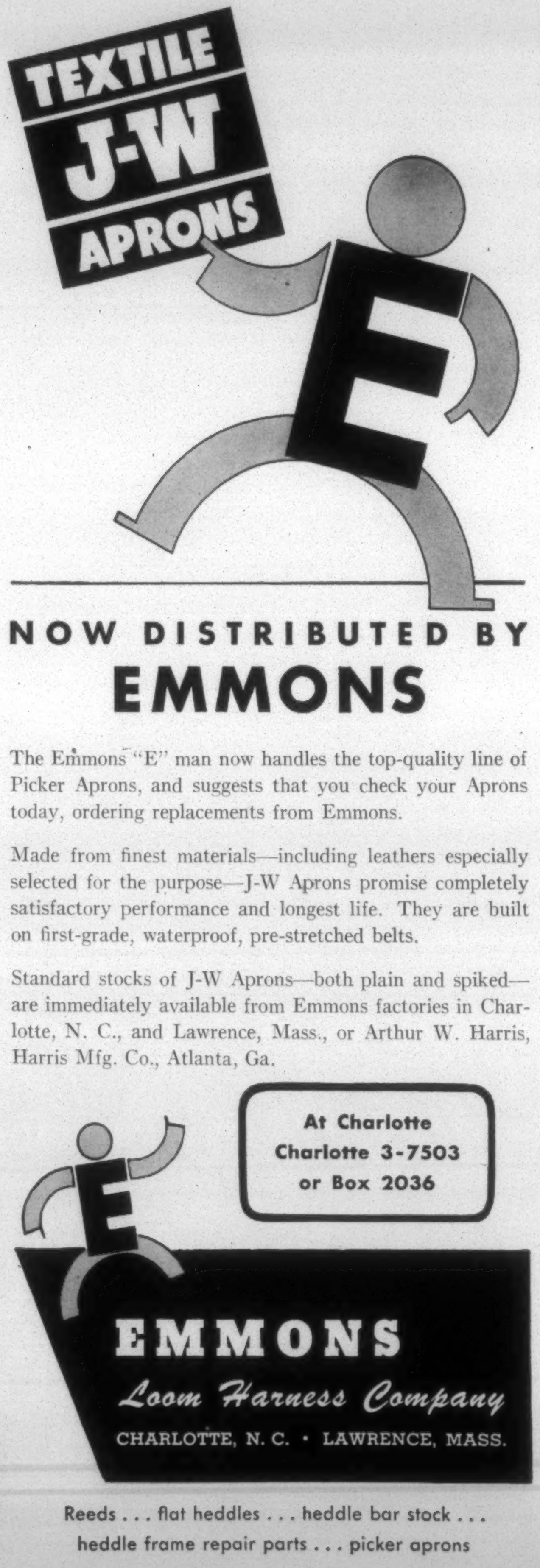
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Ten Years of Cotton Textiles—1934 to 1944

(Continued from Page 28)—are successful in reversing the trend. Deduction for exports in the current year should approximate 1,000,000,000 square yards if the previously announced program is fulfilled.

Countering declines in productivity, a steady increase in demand for both military and civilian channels of consumption featured 1943, and has continued thus far in 1944. Primary market requirements were at all times in excess of the available supply but during 1943 occasions of real shortage were rare and the distribution system functioned on the whole satisfactorily. Military stockpiles and accumulations of previous years in distribution channels provided a cushion to soften the impact of pre-invasion and invasion needs and also of unprecedented consumer spending at home, despite the fact that mills were down throughout the period to about one week's stock. There were, of course, distributive difficulties. Premature although temporary cutbacks occurred in military procurements, which resulted in somewhat more goods being available for civilian use at times during the last half of 1943. Neglect of export quotas in the final quarter of the year also contributed to the civilian supply at home. However, it soon developed that a global war was going to require much more of the textile industry than had been foreseen, and also that the needs of the nation's allies and of reconquered areas would be great. By the end of 1943 it was evident, therefore, that drastic changes would be necessary so that the diminishing supply of goods might be spread over the more essential areas of distribution.

These changes began in earnest at the outset of 1944, and there is every indication that strict regimentation of cotton goods distribution will continue to be the outstanding feature of the year, barring an early ending of the war. Most conspicuous in this trend was the enlargement by WPB of the M-317 and L-99 regulations. In order to eliminate irregularity in the volume of priority business between mills, and so assure an even flow for essential uses, looms were "frozen" and required to produce specified cloth constructions. Minimum percentages of production against priority orders were required of each plant. The products were channeled under a revised priority system into specified end-uses, consisting in the main of military needs, export set-asides, and "essential civilian" goods which included numerous industrial types, bag goods, electrical cloths, fabrics for plastic laminates, abrasive cloths, buffing cloths, tapes and numerous other descriptions. Other provisions were for items such as work clothing and other textiles necessary for workers in war plants and essential industry. Unfilled orders on the books of mills on priority ratings which had been reported at 71 per cent in June, 1943, and which had receded to a low of 61 per cent by September of that year, showed a progressive climb, thereafter and reached a record for the war period of 73 per cent in February, 1944. Latest reports as of May show 71 per cent, but the figure probably is higher now.

The Export Situation

The export situation came in for serious attention over the period. Early this year Lend-Lease appealed for substantial quantities of goods and the Army Quartermaster Corps joined with them in an appeal to the industry. The part played by textiles in directly aiding the war effort of Australia was emphasized, along with the needs of other allies. Later the Combined Production and Resources Board laid out export requirements for this country of 490,000,000 yards for the first half of the year. In a drastic May 29 revision of M-317, export set-asides were sharply increased on a retroactive basis for the second quarter of the year. Mills in June were required to make up for lesser export set-asides in effect the two previous months. As a consequence of this move, the export situation was substantially brought up-to-date. Thereafter the War Production Board relaxed export quotas in an M-317 revision early in July, which was put out with timeliness so that the confusion attendant upon the previous retroactive order might be avoided.

One of the disappointments of the past year for cotton

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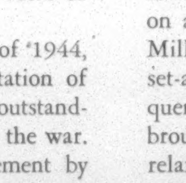

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goods interests anxious to provide more goods for military and civilian purposes was the failure of the textile bag materials situation to work out as expected. In pre-war periods, about 600,000,000 to 700,000,000 yards of cotton goods have gone into bag manufacturing annually, along with about 800,000,000 yards of burlap. The original L-99 order, owing to cutting off of burlap shipments at the outset of the war, had diverted additional cotton goods to this market with the objective of providing around 1,400,000,000 yards annually. In the second quarter of 1943 the government here made direct purchases in India of burlap totaling 850,000,000 yards, the bulk to be shipped in the July, 1943, to March, 1944, period. Arrivals of these goods were subject to lengthy delays, however, and cotton goods manufacturers continued to shoulder an important burden which otherwise might have been carried in part by burlap. While shipments have been freer and supplies of burlap greater under recent date, the WPB has been allocating burlap conservatively, since it has not been possible for the government to make additional direct bulk purchases this year, and military needs are uncertain. A purchase program is now under way and according to last reports about 180,000,000 yards of burlap had been obtained for nearer shipments. Bag manufacturing operations are running substantially higher this year than last, and it appears that a heavy amount of cotton goods will continue to be required for such packaging, to claim goods which might otherwise help relieve the supply situation in other directions.

Important changes in the channeling of cotton goods under wartime conditions have by no means ended, and important new extensions into the field of ordinary civilian goods have been taking place. The current years has witnessed an extraordinary tightening of supplies of goods for such purposes. This has been the result of a period of nearly two years in which sales of goods at retail have been constantly in excess of new supplies flowing to stores. Receding production combined with rising requirements for military, export and those civilian goods heretofore classed as essential have meant that distributors' stocks have declined extensively. As a consequence, such items as children's wear, men's shorts and shirts, women's house dresses, slips and other items became scarce. Amendments to Order M-328B resulted from this situation and important yardages of given constructions were ordered set aside for such uses.

Continuing along these lines, and in accordance with a policy of providing so-called low-end goods, the government has just recently issued its Order M-385 which establishes a new type AA-4 priority rating so that given fabrics will be made available for clothing and other items for civilians, falling within fixed price limits. Unlike other priorities, these do not affect gray goods mills, but rather are usable against those performing the converting function in cotton goods, and against production of colored goods plants. Also, they are applicable only against the otherwise unrated residue of production. From 20 to 50 per cent of the otherwise unrated production of a specified list of fabrics are thus brought under control. Suggestions in this new order, together with other exports, indicate that it may be expanded rather extensively in the future, so that less and less of the 29 per cent of production which in May could have been called free goods will remain outside the orbit of government controls. Another consequence of this order and of later supplements and amendments to

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it probably will be the substantial curtailment of so-called luxury lines for the balance of the war period.

Looking ahead, there is every indication of a continuing tight supply of cotton textiles until such time as the end of the war appears as a definite fact. There are at present no military cutbacks taking place which affect total volume going in this direction. Instead, Army chiefs have emphasized their expanded requirements of duck and other tentage materials, for whose supply new measures of loom conversion have recently been issued. Requirements for civilian goods heretofore classed as essential remain as heavy as ever. Continued heavy public spending together with the stock reduction that has taken place and the current channeling of goods into lower priced lines will accentuate tightness. The end of the war in Europe would reduce military takings in large measure, but projected relief needs may substantially offset this. There should of course be some loosening of the civilian supply situation at that point, and in time a lessening of manpower problems which currently hold up production. More considerate treatment of textile pricing problems by the Office of Price Administration also would contribute needed incentives for getting out more goods. All factors considered, however, the outlook at mid-year would seem to be for little change in production trends other than those of a seasonal character, further extension of controls over production and distribution, and concentration of the market on the problem of supplying the rising volume of essential and rated needs to the detriment of "free" goods.

The American Tropics—A New Home for Manila Hemp

(Continued from Page 24)—be done in the Central American area until workable processing machinery was designed. Industrial demand requires high-grade fiber. Many years, as well as much money and human energy, have gone into the perfection of a satisfactory processing method.

At first small hand machines were utilized. Then a machine was developed which cleaned the fiber by means of a jet of water under high pressure. Neither of these methods, it was shown, could produce high-grade fiber in the desired commercial quantities. Eventually a machine was perfected abroad for use in decorticating sisal hemp. This machine was adapted to abaca. Now it is manufactured in the United States for the Central American operations.

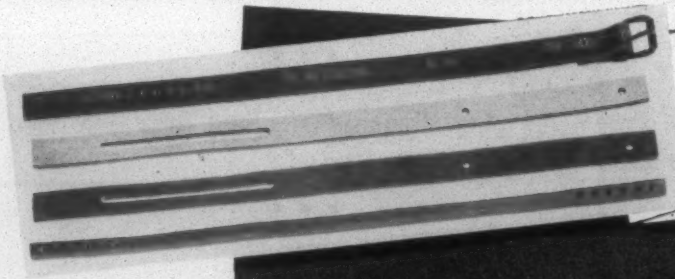
Central America, with its established banana industry, naturally takes to the production of abaca. It has the soil, the climate, the rainfall. Abaca, like the banana plant, is subject to devastating pests. However, two high-yielding abaca varieties, the Bugulanon and the Maguindanao, are higherly resistant to the Panama disease. This destructive fungus wiped out much of the banana industry along the northern coast of Panama and Costa Rica.

The two disease-resistant varieties have grown so successfully in Central America that they produce two to three times as much as in the Philippines. This is another advantage which will help the new industry get a strong foothold.

It takes more than a year for abaca to come into production when started from the plant material used for seed stock. Once in production, the plant can be harvested about every six months. Only the trunk of the plants produces fiber. Sections of the trunk are removed, flattened in the processing machine and the fiber is taken out mechanically.

Abaca, I am convinced, has a bright future as a commercial crop in the tropical Americas. It has had a rare opportunity to get started during these war years. The cordage industry—like the Merchant Marine and Navy—is singularly fortunate in the way abaca losses are being replaced.

More than that, the arrival of abaca in Central America as a commercial crop emphasizes what can be done in the establishment of new crops. First, the story of abaca shows the time, the patience, the preparation required in starting new crops. Secondly, abaca shows what scientists and engineers contribute to the development of agriculture, the basic industry of the Americas. And, finally, abaca illustrates how well-organized plantation industry can produce new crops commercially. In abaca, a war crop with a future, the Americas have a demonstration of what plant science, joined with the genius of the Machine Age, can achieve in opening new industries for inter-American trade.



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Extension Textile Courses Are Scheduled

Edward W. Ruggles, director of the engineering, science and management war training courses at North Carolina State College, has announced that registration for the fall courses in textiles will be held during the first week of September. At the present time, courses are scheduled for Rockingham, Charlotte, Shelby, Spindle, Mooresville and Greensboro. Persons interested in the organization of similar courses in other mill communities should contact Mr. Ruggles at an early date.

Mr. Ruggles says this is an excellent opportunity for high school graduates who are now engaged in the manufacture of fabrics or other phases of the textile industry to lay the foundation for future advancement in textile establishments. Two hours of instruction will be given two or three nights each week for 17 weeks by well qualified teachers. All expenses, except textbooks (cost not to exceed $2.50) are paid by the Federal Government. Students who enroll in these courses will be taught fabric design and analysis, yarn and fabric calculations and the fundamentals of fabric testing.

These courses will be given under the supervision of T. R. Hart, professor of weaving and designing of the textile school of North Carolina State College, and information about them can be secured from him. Enrollment is limited to 20 students and applications should be mailed as early as possible.

Lightweight Asbestos Yarn Described

A new asbestos yarn which makes asbestos clothing only half as heavy as formerly has been described by the United States Rubber Co. The yarn is made by blending asbestos fibers with a small percentage of cotton, the latter giving added strength and weaving qualities.

This asbestos yarn is used to make the fire-fighting suits, helmets, shoes and gloves of the Army and Navy. The entire output at present is going to the military forces, and is made at Hogansville, Ga. After the war this fabric may be used to make ironing board covers on which a hot iron can be left without starting a fire. Other uses are pot and pan holders, gloves to protect a cook's hands from oven heat, jumper suits, aprons and other protective garments for steel mills and foundries and bags for sweepers that pick up hot coals.

The fabric also will form upholstery for seats in lounge and smoking cars and for other furniture cover purposes. It will make asbestos awnings. The fabric is not damaged by water. The Navy is using the fabric for insulating tape for electrical cables. It forms fuel hose in combat tanks, and is used for a variety of heat conducting or fire prevention jobs in planes.

Members of the bobbin and spool manufacturers industry advisory committee, War Production Board, met last month at Washington to discuss the tire cord program, availability of materials, and the manpower situation. C. E. Watson of the WPB textile, clothing and leather bureau served as presiding officer. Emphasis was placed on the fact that tire cord production depends greatly on the wool supply, but that the heavy demands could be satisfied through proper handling to the manufacturers' needs for raw materials and workers.

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Recent Reports Indicate Silk Industry in This Hemisphere

Within two years, says one enthusiastic sericulturist, America will be producing within her own boundaries all the silk she needs. Others—arguing that nylon will foment a bear market for post-war silk and that the Orient and rayon still are to be contended with—say that amount need not be much.

But Walter S. Roberts, head man of a new silk producing company, is convinced that his outfit is in possession of a device—a semi-automatic cocoon reeling machine—that may be the cotton gin of the silk industry.

The prohibitive factor to American silk production in the past has not been the inability to raise white mulberry trees and silkworms, but the high cost of American labor as compared with the penny wage scale of the Japanese. For the tedious eye-straining work of unreeling a silk cocoon, the Japanese worker received 65 cents for an 11-hour day. It took him 100 days to reel a bale of silk.

With the American machine—which combines one of man's oldest inventions, the spindle, with one of his newest, the electric eye—Roberts claims a bale of silk can be reeled in seven days. The American worker receives three to five dollars a day. The net effect of these figures would be to put labor costs in this country on a level around 40 per cent less than in Japan. Roberts has formed a company called Anscowain which has nine of the machines (they cost $5,000 to build) in operation and a tenth on order.

The company is not in the silk-raising business. It simply buys silk cocoons and goes on from there. It does, however, seek to organize and interest chambers of commerce, individuals and communities in silk growing. This year, the people Anscowain has been able to interest, produced a crop of 400,000 mulberry trees. From them Anssowain expects to get 15,000 pounds of silk. Next year they expect 100,000 pounds and the following year all the silk the U. S. can use. "That," says Roberts, "will necessitate 175,000,000 trees or 250,000 acres."

For tending those trees and the silk worms, Roberts has a pet plan. "It's a job for war veterans," he said. "It could give some kind of employment to 1,000,000, and even a man in a wheel chair could grow silk worms."

Hatching the eggs is the most difficult operation and that consists only of taking the trays from the incubator (which can be made of old cigar boxes and electric light bulbs) at the proper time and placing different grades of netting on perforated paper above them for the worms to climb to a new tray of mulberry leaves. It pays well. Price for cocoons is 20 cents a pound. An acre yields 1,800 pounds of cocoons per month through the leafing season of five to seven months.

Linen Process Will Be Licensed

Licenses for the process of making linen developed by the chemistry department of the University of Minnesota, Minneapolis, are now available for individual firms, especially those interested in making coarser grades of linen, such as toweling, it is reported by Dr. F. E. Montonna, professor of chemical engineering.

Dr. Montonna stated that the department feels enough research has been done on the coarser linen to make it almost foolproof, and ready for mass production. The high lea linens still need a little more experimentation, in his opinion.

He stated that the university will license the patented process to any interested concerns, as soon as the right offer is received. A nominal license fee is asked, he said, for the prime purpose of setting up a fee for further research. Linen spinners in the East, who have viewed the linen made by the chemical process, have been favorably impressed, according to Dr. Montonna.

To date, no licenses have been let, and no firm is controlling distribution of the "American linen." A pilot plant, now in construction, will soon make available about 50 to 100 pounds a day of the new linen fiber, which will be sent to various spinners for testing under actual conditions. It is expected that the plant will be producing fiber by the first of the year. Production is entirely experimental, and it is hoped by Dr. Montonna that the variety of linen fiber produced through the process will enable several manufacturers in different fields to start production.

Rubber-Coated Glass Fabric Finding Wide Application

Designed to solve several major problems which have faced the aircraft industry in combat planes, a new glass, flameproof, synthetic rubber-coated cloth has been developed by United States Rubber Co. Great tensile strength at abnormally high temperatures, extreme lightness in weight and high tear resistance are its main features. In addition, it is fireproof, gasoline-proof, oilproof, greaseproof, waterproof, mildew and insectproof, and not affected by acids or alkalies.

One important use is to protect personnel in Superfortresses and Flying Fortresses at high altitudes, through the elimination of possible breaks in metallic heating ducts caused by vibration and other contributing factors. By sealing joints in metallic hot air ducts, this material gives the plane's heater system greater efficiency, insuring essential, quick distribution of heat.

In fast combat planes that must operate at extremes of altitudes, small openings have to be left between joints of metallic hot air ducts to allow for vibration, expansion and contraction. Sealing these openings tightly with a lightweight cloth, strong enough to withstand the great heat that passes through the hot-air ducts, has for years been a baffling problem to aviation experts. The development of the synthetic coated flameproof glass cloth solved the problem. Double-coated, this same glass cloth is also being used for gun bore aligning targets, because it retains its shape without stretching or distortion of the gun sighting pattern. The new type targets act as a means for frequent checks of the gun more alignment with the gun sighting telescope.

Finished weight of the double-coated glass cloth is only 7.6 ounces a square yard, and the single-coated cloth used for the metallic hot-air duct weighs only five ounces a square yard. Aviation companies that are at present employ this material in aircraft building are also testing it for many other war uses. Made in a variety of gauges from .006 to .040 and in tensile strengths from 165 to 800 pounds an inch, it is considered inevitable it will have many important post-war uses.

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When you are searching for the right belt for the right drive . . . with the idea of keeping efficiency high and maintenance low . . . your best chance of finding it is by going to the firm that has *experience*.

For many years, I. B. Williams & Sons have been producing, in their Cocheco brand, belting that is ideally suited for textile machine drives. Cocheco has all the advantages of leather belting — superior traction, ability to handle shock loads, longer life — plus a known record of successful installations.

A substantial stock of various weights and widths is maintained in the "heart" of the textile industry . . . Greenville, S. C. Service is keyed to the demands of the textile industry. Quick shipments and the close personal attention of its Greenville representative are evidence of that.

For textile belting, Samson hair-on check straps and loom leathers, consult—

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Require oil only half as often as cast iron bolsters. The oil stays clear and clean and free from heavy gum accumulation, permitting the spindle to revolve with less friction and less wear.

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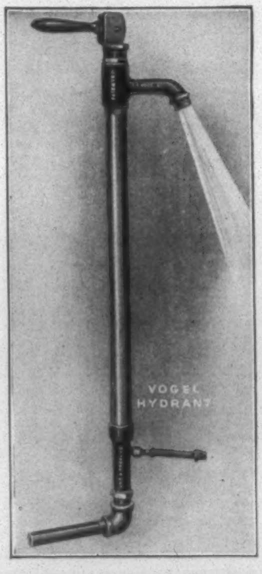

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Running water every day of the year. Will never freeze when properly installed. Nearly 100,000 in use.

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Yes, remember it well because it is a symbol of satisfaction among customers and plumbers alike.

Vogel Frost-Proof Hydrants are serving the war effort throughout the Nation—in war plants of all kinds, in shipyards and on thousands of farms ... And they are serving in the traditional Vogel way —economically and dependably—day in and day out.

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OBITUARY

Frank Griswold Hall, 73, president of Stein, Hall & Co., Inc., died at Hanover, N. H., July 30 from injuries received in an automobile accident. He had become associated with the company in 1890, was made a partner within a decade and was elected president in 1918. He was also president of several Stein, Hall subsidiaries. He was a member of the Union League Clubs of New York and Chicago and president of the Tapioca Products Association. He is survived by his widow and four daughters. Final rites were held at New York.

First Lieut. John M. Mauney, 25, son of the late David Hunter Mauney, prominent textile official of Lincolnton, N. C., was killed in France July 26. A member of the armored forces, Lieutenant Mauney was a veteran of three major military campaigns and winner of the Distinguished Service Cross. He was associated with Washington Mills Co. at Fries, Va., before entering the service. Survivors include his mother, two brothers and three sisters.

Capt. James R. Adams, 34, United States Marine Corps Reserve, was killed in action during the American recapture of Guam. He had been associated with Westvaco Chlorine Products Corp. since graduation from Virginia Military Institute in 1931, and for the two years prior to entering the service was the company's manager of sales.

First Lieut. David H. Henry, associated with Union Bleachery at Greenville, S. C., prior to entering the Army, was killed in action in France July 11. He graduated in textile engineering at Clemson College in 1936 and was called to active military duty in January, 1942. He is survived by his mother and two brothers.

Lieut. Pressley A. Stack, 22, son of S. L. Stack, superintendent of Father George Mills at Sanford, N. C., was killed when the Army plane he was piloting crashed July 26 near Charleston, S. C. He was a sophomore at the University of North Carolina before volunteering for Air Corps service in 1942. He is survived by his parents, his wife, one brother and two sisters.

Harry Scott Wherrett, 68, chairman of the Pittsburgh Plate Glass Co. board of directors, died Aug. 13 after a brief illness. He was also a vice-president and director of both Ditzler Color Co. and Southern Alkali Works., as well as a director of Westinghouse Electric and Mfg. Co. He is survived by his wife and a sister.

Floyd H. Couchman, manager of the Boston, Mass., area for American Aniline Products, Inc., died July 30. He had been very active throughout the New England area for the past ten years.

Pvt. George W. Dobbins, Jr., son of the general superintendent of Pee Dee Mfg. Co. at Rockingham, N. C., has been reported missing in action over India by the War Department. He entered the Army in May, 1942, and was sent overseas the following October.

Du Pont Denies Charges of Violating Anti-Trust Laws

In an answer filed in U. S. District Court at New York, E. I. du Pont de Nemours & Co. denies having violated the anti-trust laws in its relations with Imperial Chemical Industries, Ltd., of England, and other foreign companies, or having participated in a "cartel" arrangement to restrain trade in chemical products. The company asserts that these relationships benefited the American people by promoting scientific advance in chemical production and reducing prices.

The company admits the existence of licensing agreements under its patents and processes but asserts that the purpose was to encourage the interchange of technical information and to hasten and to aid Du Pont's development of new and improved products and processes for sale primarily in the American market.

"Thus the patents and processes agreements between Du Pont and I. C. I. have made many of the technical developments of I. C. I., one of the more important foreign chemical manufacturers, available to Du Pont and have brought about a wider and more rapid development and distribution in the United States of new chemical products and processes."

The answer sets forth that during the period of 1928 to 1943, inclusive, the weighted average price index of Du Pont's principal products has decreased by more than 34 per cent, while during the same period, as reported by the U. S. Department of Labor, price index of all commodities has increased 6.7 per cent, and the price index of chemicals and allied products has increased 5.5 per cent.

Defendant alleges that it never controlled, or possessed the power to control, the chemical business in the United States and that "as of 1939 Du Pont's total sales accounted for less than eight per cent of the total United States production of chemicals and allied products as reported by the Census of Manufacturers of the United States."

Four Inspection Courses Are Scheduled

Four educational institutions in the South are scheduled in the near future to begin courses in the inspection system of "Quality Control by Statistical Methods," which recently was adopted for the inspection of textiles and other Army supplies. The aim is to give manufacturers an opportunity to familiarize themselves with this new development, since the adoption of revised inspection procedure has necessitated the improvement of plant inspection in order to avoid the possibility of increased rejections.

The executive training courses are offered as part of the engineering, science and management war training program of the United States Office of War Education. Classes are scheduled at the University of Tennessee, Knoxville, Aug. 16-24; University of Oklahoma, Norman, Sept. 13-21; Texas A. & M. College, College Sation, Oct. 25-Nov. 2; and North Carolina State College, Raleigh, Nov. 8-16.

The firm of Cosby & Thomas, Charlotte, has been appointed sales representative in the North and South Carolina territory for Aberfoyle Mfg. Co. of Belmont, N. C. The company's production of fine cotton yarns was formerly handled in the Carolinas from the Belmont office by William H. Crenshaw, who is now plant manager.

WILLIAM R. NOONE & CO.

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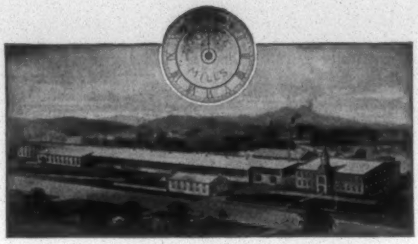
105 Washington St. Boston, Massachusetts



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We are the oldest manufacturers of Slasher Cloth in America. Our experience enables us to build a Slasher Cloth that will meet your most particular demand. Use NOONE'S SLASHER CLOTHS and be convinced.

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Sterling Ring Travelers

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Sterling Travelers have the stamina to stand the long wear that is so necessary today, when the mills are so short of help and cannot take the time to change travelers. Why not ask for samples?

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Thoughts On a New World

(Continued from Page 18)—profit system. It accentuates the system of free enterprise and gives it a broader meaning. Applying such policies as have been suggested implies profits and ability to donate. They imply the spirit of individual initiative and free enterprise, because there is no legal mandate making such action necessary. They liberalize the thinking of the American public in its consideration of the values and philosophies of business.

There are so many social attitudes that business can assume and apply. These statements are not made to convey the idea that such policies are not already being practiced. There are notable examples in every state. This discussion is intended to call these facts to the attention of the indifferent and the inactive. It is a call to show at least one or two policies that can be adopted by business generally so that it can give to the general public convincing evidence that industry is and will continue to be a part of the New World. There can be greater happiness and joy in social satisfaction than in economic satisfaction. Industry in the New World must enjoy this two-fold function.

With the foregoing suggestions which are intended to ugment your social and human philosophy, if you are practicing it, and to stimulate in business a desire to enact such policies if it does not have them, we draw this discourse to a close with a short discussion of a dynamic situation that all employers will eventually meet—the problem of the returned soldier.

How Will He Be Handled?

This man—he is a boy no longer—was your employee. He is going to be quite a problem to you. He will not be normal regardless of whether he left the states or went overseas. He will suffer more from psychological or mental dislocations than physical. He may have lost an arm or leg. He may have had one or more of many other types of wounds. These may or may not affect his employability. His mental states will be more influential in determining a method of handling him than any other. Wounds and shock produce terrific changes in mental stability and outlook. Glamour, excitement, travel, speed, new group formations and dozens of other environmental factors, aside from wounds or shock, are destined to impress their influence upon his mind. These will produce all of the varying mental states imaginable, from extreme depression to the highest elation and self-importance and a general dissatisfaction with everything. Many of them will try the souls of man unless they, the employers, are tolerant, patient and understanding. These men are our men and are not responsible for their present mental states. The nation and their own patriotic devotion to it made it necessary for them to have these experiences and these experiences have produced their present mental attitudes. They are victims of environment and now they come back home to an environment which for many will be out of keeping with their returned mental attitudes.

American business has the human and social responsibility to stay with these men until they are re-orientated and started again in a peaceful world. They cannot discharge their obligation by simply offering them a job for which they are unfit or which they do not desire. The placement of these returned fighting men back into economic employment is the duty and responsibility of business and it must not be lightly regarded. Business can everlastingly incur ill will or good will from society determined by its attitude toward social and economic adjustment of our men when and as they return. This problem is more than employment, it is social and economic adjustment. Those loyal and faithful workers, old and young, crippled and retired, 4-F's and otherwise, who stepped into the places made vacant by those who went to war, deserve a social consideration as they now retire or change to make way for the returned employees.

This is a part of the social and economic responsibility of management. It is not so simple as firing and hiring. Unemployment with its deadly ravaging social degeneration must never be allowed to become rampant in this nation again. We give you no answers to the human problems. We have highlighted only a few. The solution is local and obligatory. Never before has industry faced such a social obligation. *(To be continued.)*

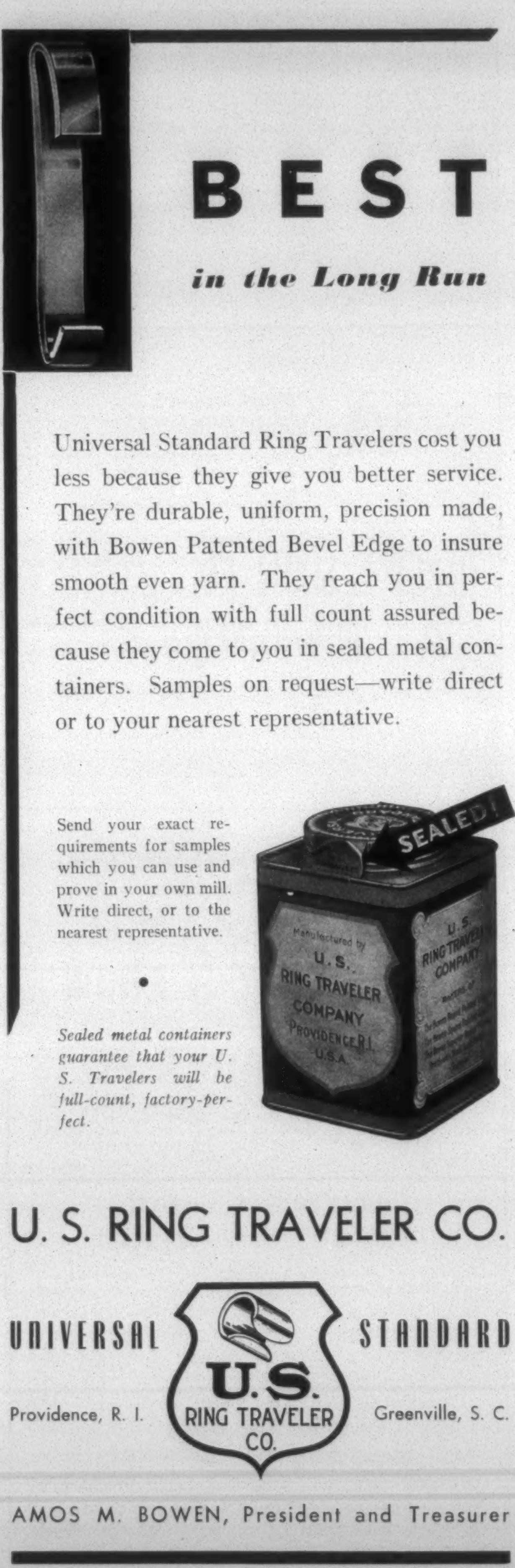
New Plant Cafeteria Spurs War Production At Beaumont Mfg. Co.

(Continued from Page 20)—with comfortable easy-chairs and tables of magazines where employees may rest, those not working in the mill proper to wait until the front entrance doors are opened after the inside employees have finished their meals, or there they may wait before and after shirts for their busses, or cars. At the left side of the lounge is the new office of the *Beaumont "E,"* the house organ of the company. The employees may drop in to give the latest address of their sons in the service, or to tell the editors some bit of mill or village news. The *"E"* also goes out to every employee and former employee in the armed forces and answering letters come back from every corner of the globe. The walls of the lounge office are distinct in treatment with a paper of soft French gray with sprays of stylized cotton branches, with leaves of a darker gray and white bolls and cream and pale pink flowers.

There are two entrances to the basement from the front sidewalk, one to the women's lounge and one to the men's. These waiting rooms are beautifully and comfortably furnished and behind each lounge is a rest room, some 30 or more feet long and off these, in each section, is a group of ten tiled showers where an employee before or after work may have the restfulness of a hot or cold shower. These showers will be available to the employees at any time as each rest room is entirely separate from any other part of the building.

An experienced and efficient corps of managers, dietitian and workers, each of training and experience, will see that the cafeteria functions to the highest possible degree. Nothing is spared in meeting every standard of health and dietetic requirements. The plant is not run for profit, as a check with menus of commercial cafeterias will show.

W. S. Montgomery is president and treasurer of Beaumont Mfg. Co., and his executive assistant is Miss Annette Duchein. Both Mr. Montgomery and Miss Duchein spent a great deal of time in executing plans for the new cafeteria. P. D. Smith is cafeteria manager and Miss Virginia Cottle is dietitian. T. C. Daniels supervised the building for Ohio Construction Corp., A. L. Ellege was the architect, A. L. Marcus Straus Co. furnished equipment and the Blue Door of Spartanburg was consulted on interior decorations.



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Send your exact requirements for samples which you can use and prove in your own mill. Write direct, or to the nearest representative.

Sealed metal containers guarantee that your U. S. Travelers will be full-count, factory-perfect.

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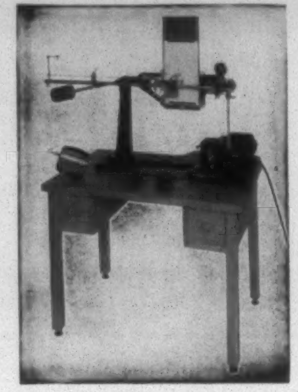

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The 60 models of *Scott Testers enable you to apply recognized standard tests to your research, purchasing, production control and acceptance inspection. Models with capacity from single hair to 1 ton for tensile, hysteresis, burst, twist, crepeage, etc., etc.

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Textile Conversion Expected To Be Rapid

"The synthetic fabric industry is ready—not only ready—it's eager to meet the post-war challenge posed by transforming a wartime economy into a peacetime one. It has many uses for its war-built factories. It will have use for plants abandoned by others," said Miss Margaret Fuller, retail sales promotion manager of Textron, Inc., in a recent address. "We'll be ready because we won't need time for retooling. That's one reason. The machines that are now making textiles for military use can change over quickly to textiles for civilian use."

Turning her attention to rayon, Miss Fuller said that today about one-quarter of the rayon produced by the viscose process goes into military tires. Quoting one of the big men in the automobile industry who recently stated that the lifetime mileage of post-war cars will be at least 100,000 miles, she declared that rayon fabricated tires will last for the duration of the car. "Research in the rayon industry has led to new developments so that today the old problems of tensile strength that varied with wetness and dryness and of susceptibility to heat are being solved. Two major companies are planning to bring out rayon yarn which is as strong when wet as the strongest rayon yarn of yesterday was when dry."

In talking of the new synthetics now being created, Miss Fuller expressed the thought that "in the post-war world a woman may wear an ensemble, complete from head to foot, made from synthetic fabrics; a home may be furnished from cellar to attic with materials made from synthetic fibers; the vehicles in which we ride, the tools of daily living—all will owe a debt to synthetics."

Two Amines Will Be Allocated

Monomethyl amine and dimethyl amine, the alkyl amines widely used in the manufacture of dyestuffs, detergents and pesticides, will be placed under quarterly allocation as a schedule of General Allocation Order M-300, effective Oct. 1, the chemicals bureau of the War Production Board has reported. Their distribution has been controlled by directive for the last six months.

Chemicals Bureau officials said that the military demand exceeds production capacity so much that it is probable that all civilian uses will be denied for the next six months. By terms of the amendment to M-300, a small order exemption without use certificate of 1,000 pounds of monomethyl amine and 1,000 pounds of dimethyl amine per person per quarter is established. Suppliers seeking authorizations to use or deliver must file application on Form WPB-2947 by the 15th of the month preceding the proposed allocation quarter. Separate sets of forms are required for each alkyl amine.

Plan Campaign for Philadelphia School

Solicitation of funds for the Philadelphia Textile Institute Foundation will be started soon, according to Russell C. Osborne, campaign chairman. The foundation plans to broaden the school's scope, augment its faculty, improve and add to present equipment, increase facilities for textile research, and to make it possible for an increased supply of trained executives to be channeled into the industry. Funds will be sought from branches of the industry located all over the nations.

Library At Institute of Textile Technology To Serve Industry

The Institute of Textile Technology, recently chartered in Virginia as a graduate school and research institute, has adopted a program of library service to the cotton textile industry. The library is housed in the institute's temporary quarters on Rugby Road in Charlottesville, Va.

The library's first function is to provide faculty and students with all the literature needed for research, teaching and study. Every research project, to gain the full benefit of previous experience, must begin with a comprehensive study of earlier work in the same field. Active aid to research workers in making these studies is an essential feature of the library's work. The second function is to keep member mills well informed concerning technical developments in the textile industry. This will be done chiefly in one of three ways:

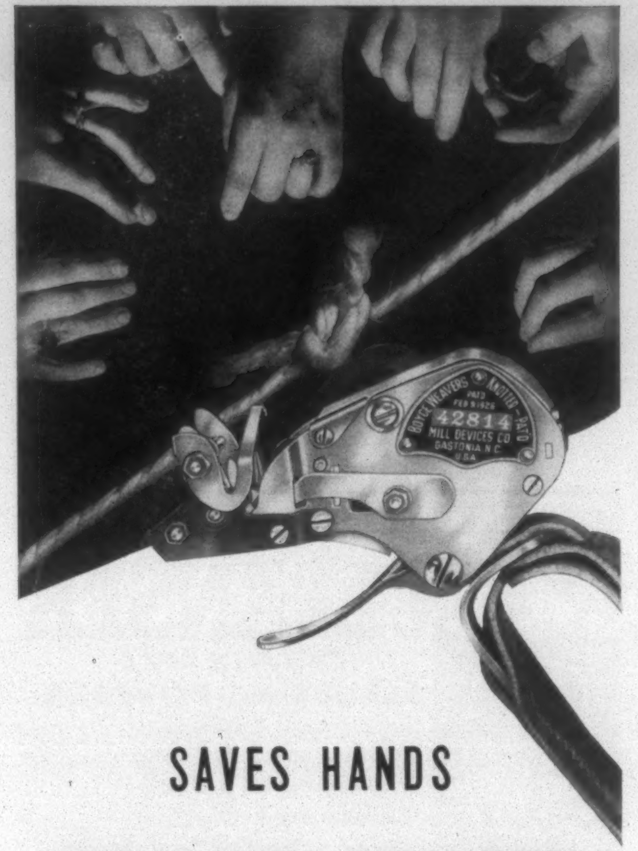
1. *Current Developments.* American and foreign periodicals are being reviewed monthly in the *Textile Technology Digest,* the institute's first publication. It is received by all member mills and by selected schools and libraries through which it is accessible to the public. Abstracts in this review are written to convey such information as readers need for deciding whether they should consult the original article or patent.

2. *Prior Developments.* Bibliographies will be compiled on selected topics relating to textile manufactures. Abstracts will be similar in character to those in *Textile Technology Digest.* Each bibliography will present the background of the selected topic and bring the record up to date so that readers will know the current state of the problem. Circulation outside of the institute will be restricted to member mills excepting as permission may be granted by the president of the institute for circulation to non-members. The first bibliography in the series is now in process of compilation; it relates to certain modern developments in sizing and impregnating fibers and fabrics.

3. *Publications of the Institute of Textile Technology.* The technical librarian, as editor, will consider members' needs in guiding the publication program. Confidential reports will be restricted in circulation; member mills will be kept fully informed of research work supported by the institute's own funds, and sponsors will receive full reports of work on their projects. In appropriate instances the fundamental research work of the institute will be published in periodicals, thus becoming public property.

The library is administered by a technical librarian and a librarian. The technical librarian and editor is Dr. Julian F. Smith, a chemist trained at the Universities of Illinois (B.B.S., 1916), California (M.S., 1920) and Chicago (Ph.D., 1922). He has served in chemical literature and patent work with National Aniline & Chemical Co., Commercial Solvents Corp., B. F. Goodrich Co. and E. I. du Pont de Nemours & Co. In 1939 Dr. Smith was appointed associate director of the Hooker (now Kresge-Hooker) Scientific Library, where he carried on a nation-wide service similar in several respects to his present work for the textile industry.

The librarian is Miss Ruth Beedle, a graduate of the University of Illinois with degrees in home economics (B.S.) and in library science (B.L.S. and M.L.S.) Textiles, as related to clothing and home furnishings, constitute one of Miss Beedle's chief interests in home economics.



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Saves Hands for more productive work—ties a weavers' knot in a split-second—works 24 hours a day, *every* day.

Backed by the experience of thousands of Boyce Knotters at work in hundreds of mills is the Service Department that guarantees maintenance without work interruption.

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All Type Colors on Cotton Yarns
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China's Post-War Textile Needs Listed

China's estimated textile requirements for emergency relief during the first six months of the post-war period exceed 840,000 tons of cotton and cotton cloth or 3,200,000 bales of raw cotton, most of which may be purchased from American cotton producers and mills, it was revealed recently.

Cotton piece goods as well as raw cotton will be needed as China's own manufacturing facilities have been paralyzed by the war. Mills comprising 25,000 looms and 5,000,000 spindles along the Eastern seaboard of China are now in the hands of the Japanese with the probability that they will be stripped or completely absorbed at the war's end.

The immediate post-war relief needs of China as presented to the UNRRA contemplates succoring 84,000,000 war victims with minimum requirements for food, clothing, shelter and transportation for moving supplies. Of the estimated textile requirements one-half the 3,200,000 bales would be shipped as raw cotton and one-half or 1,600,000 bales manufactured into over two billion yards of coarse cotton piece goods for shipment.

For American textile mills to supply China with this large order of cotton piece goods would keep 125,000 looms and over 6,000,000 spindles busy for an entire year, providing over 141,000,000 man-hours of employment.

Asbestos Cloth Output Being Increased

A considerable increase in asbestos cloth production for major Navy requirements is expected as a result of a newly-developed asbestos-fibrous glass cloth, it was reported at the recent meeting of the asbestos textile industry advisory committee, the War Production Board has announced.

Since increased Navy requirements for asbestos cloth have caused asbestos textiles to become a critical bottleneck in war production, officials of the WPB cork, asbestos and fibrous glass division said that the new cloth will reduce this bottleneck. Navy representatives at the meeting indicated that the fibrous glass cloth is satisfactory for pipe lagging, an important Navy need.

Industry members were informed that 240,000 square yards of asbestos-fibrous glass cloth will be required each month, incorporating 240,000 pounds of asbestos yarn. The fabric will be composed of 72 per cent asbestos fiber, 22 per cent glass fiber, and six per cent cotton yarn. This will be woven into three-ply cloth, weighing 1¼ pounds per square yard, and utilizing existing equipment of the asbestos textile manufacturers. WPB officials, stressing the urgent need of this material for the Navy, said that unless present producers can double their output by the use of the asbestos-glass cloth process, it would be necessary to erect a new plant in a labor-free area to cope with the problem.

Three-Dimensional Seeing Is Promoted

A completely new and up-to-date booklet on "Three-Dimensional Seeing, the Science of Color and Light for Better Vision in Industry" is now being made available by the Du Pont finishes division. The third publication offered since this system of applying color to improve industrial seeing conditions was announced before the Illuminating Engineering Society in 1941, the 20-page booklet contains information derived from color-conditioning installations in more than a thousand plants. Recent results of a continuing Du Pont research program are stated for plant management, maintenance and safety engineers.

Included in the profusely color-illustrated brochure is a section devoted to the "Safety Color Code for Industry," a corollary to "Three-Dimensional Seeing." The color code recommends as a standard the use of specific color signals and symbols to denote specific hazards and safety equipment.

Photographs—many of them paired as "before-and-after"—show how contrasting colors increase production, reduce injuries and improve morale in textile mills. A number of statements from major companies that have adopted "Three-Dimensional Seeing" are published in the booklet, copies of which may be obtained from Dept. T. B., Finishes Division, E. I. du Pont de Nemours & Co., Wilmington 98, Del.

Metallizing Co. of America Announces New Nervous Weld Process

The Mogul Nervous Weld Process is a new development of the Metallizing Co. of America, pioneer manufacturer of metallizing guns and equipment. This new process was developed primarily to solve the problem of reclaiming defective aluminum castings and can be used with equal success in salvaging bronze, gray iron, malleable and steel castings. Other important uses are the building up of surfaces for press fits, the repair of cracked housings, motor blocks, pump housings, as well as the preparation of surfaces for metallizing.

A complete installation to do this type of repair includes a Mogul Nervous Weld Piston which requires approximately 60 pounds air pressure at four to five cubic feet per minute and a Mogul Nervous Weld Machine, 110, 220, 440 volts, 60-cycle or 25-cycle, single phase. The latter unit is completely equipped with two to ten-foot lengths of cable, male and female receptacle, pair of goggles, heavy duty ground clamp, 20-foot length air hose complete with fittings, wall receptacle and complete instructions.

The Mogul Nervous Weld Pistol deposits atomized particles of metal which are welded to the surface and pressed leaving a metal which is welded and forged. Designed for manual operation, the rod (aluminum, bronze or nickel) is fed through the pistol by a trigger control and it is possible to feed 1/8 to 3/8-inch with one stroke of the finger-grip trigger.

One of the advantages of the Mogul Nervous Weld Pistol is that it eliminates stresses and distortion in the repair of defective aluminum castings. The temperature never rises above 125° and yet provides a deposit so dense at the point of fusion that there is no apparent line of demarcation. Even photomicrographs fail to show the line of demarcation. Aluminum castings, repaired with this unit, machine perfectly and withstand sodium hydroxide solutions used to prepare casings for alumilite plating. Operating features of this new unit includes power chamber and peening motor, air-cooled nozzle, which keeps electrode as well as the work cooled, finger trigger which permits manual wire feed, needle valve to regulate air supply and electrode lug-connector.

For further information write direct to Dept. T. B., Metallizing Co. of America, 1330 West Congress Street, Chicago 7, Ill.

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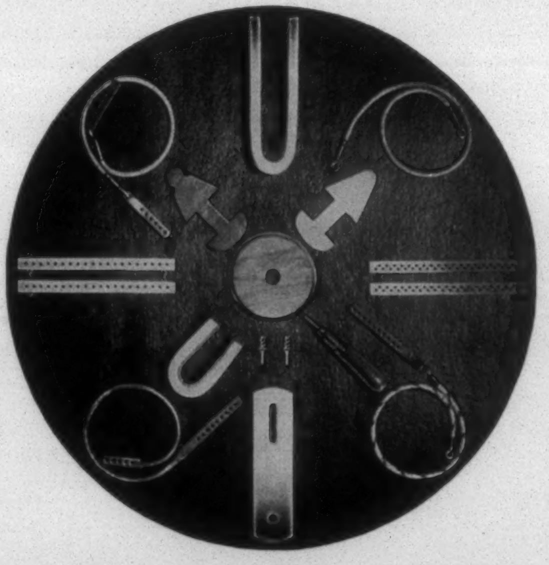

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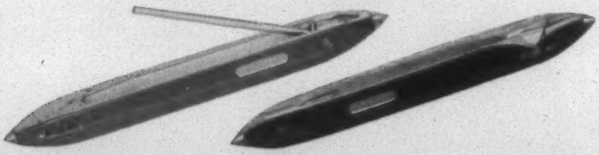

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Revised Army Textile Inspection Procedure Being Instituted

A new procedure designed not only to conserve manpower and transportation facilities, but also to bring Army textile inspection technique closer to ordinary commercial practices, is being instituted on a nationwide basis by the Quartermaster Corps, according to an announcement by Col. Vere Painter, commanding the Quartermaster General Headquarters Field Inspection Service at New York.

The new program entails utilization, wherever practicable, of factory inspection and factory acceptance of cotton and wool textiles, as contrasted to the present system of final inspection and acceptance at the Army procuring depots. In effect, the new plan will permit of almost 100 per cent of factory acceptance, with practically no change in the quality of the textiles accepted.

For cotton textiles used in both Army clothing and equipage, fabrics will be classified by their end use into "Grade A" and "Grade B" types of inspection as determined by the procuring depots, ordinarily the Philadelphia or the Jeffersonville depots; and final acceptance of the fabrics will be made at the manufacturing plants after due processes of inspection by government inspectors assigned to each manufacturing facility. It is expected that the procuring depots will include in the Grade A inspection category such items as five-ounce Type One wind-resistant twill cotton cloth—six and 8.2-ounce uniform twill cotton cloth—nine-ounce wind-resistant sateen cotton cloth, Types One, Two, Three and Four oxford wind-resistant cotton cloth—cotton duck used in the fabrication of tentage, paulins and covers comprising numbered ducks, Nos. Four, Six and Eight and Army ducks 8.25, 9.85 and 12.29-ounce.

Grade A inspection includes process inspection within the finishing plants and thorough inspection of finished cloth including stringing of defects required in contractors' inspection—stringing of defects required in government inspection—table flat-fold and perch inspection, as well as projection of addd deductions throughout lot based on findings of partial inspection by government inspector.

Grade A inspection also contemplates, as far as possible, the use of control spot inspection at receiving QM depots for advisory purposes only as a double check on the entire procedure, and also the use of control testing at government laboratories. Factory testing and shading, according to standard test procedures, will be carried on by inspectors on the spot. All factory inspections will be performed by the inspectors between the contractors' final inspection and the packing operation so as to reasonably suit the contractors' operating procedure.

It is expected that the other types of cotton textiles will be placed on the Grade B inspection list which does not require stringing of defects and utilizes the "hooker" method of inspection, or a similar continuous commercial method together with "control" inspection and testing at government laboratories.

Woolen and worsted textiles will be influenced to a lesser degree under the new inspection in that methods of inspection have not been materially changed. However, factory acceptance will be instituted wherever practicable, and this factor alone will result in considerable savings, and increased efficiency in the Army's textile procurement program.

Factory inspection will be conducted and continued only in plants that demonstrate a proper degree of control. In the event satisfactory control is not maintained, the plant concerned will be returned to previous inspection procedures. The new plan has received a sufficiently large "dry run" to indicate very definite savings not only to the Federal Government but to the contractors concerned, particularly in more prompt correction of defects as they appear in production, eliminating double shipments and in decreasing the strain on transportation facilities involved by permitting shipment direct to using agencies.

Second Quarter Rayon Output Totals 135,700,00 Pounds

Production of rayon yarn by American mills in the second quarter of 1944 totaled 135,700,000 pounds, states *Rayon Organon,* published by Textile Economics Bureau, Inc. This record output compares with production of 135,500,000 pounds in the first quarter of 1944 and with 123,600,000 pounds in the second quarter of 1943. Viscose-cuprammonium yarn output declined from 92,900,000 pounds in the first quarter to 92,200,000 pounds in the second quarter of 1944. On the other hand, the production of acetate yarn increased from 42,600,000 pounds to 43,500,000 pounds in the same comparison. Staple fiber production in the second quarter dropped three per cent to 41,400,000 pounds as compared with 42,700,000 pounds produced in the first quarter of the year. Output in the second quarter of 1943 totaled 39,800,000 pounds.

Deliveries of rayon filament yarn by American mills totaled 41,600,000 pounds in July, according to the *Organon,* compared with 43,900,000 pounds shipped in June and 40,000,000 pounds in July, 1943. Seven months' shipments totaled 304,400,000 pounds compared with 282,600,000 pounds in the corresponding 1943 period, an increase of eight per cent. Staple fiber shipments in July totaled 13,400,000 pounds against 14,300,000 pounds in June and 13,200,000 pounds in July, 1943. Seven months' shipments totaled 96,000,000 pounds against 91,900,000 pounds in the corresponding 1943 period.

Filament rayon yarn stocks July 31 totaled 6,500,000 pounds against 7,300,000 pounds on hand June 30, 1944, and 6,400,000 pounds on hand on July 31, 1943. Staple fiber stocks totaled 3,100,000 pounds July 31 against 2,600,000 pounds June 30, 1944, and 3,200,000 pounds July 31, 1943.

Alrose Chemical Announces New Process

The Proton Process, of interest to all processors and knitters of woolen fabrics, was announced recently by Alrose Chemical Co. of Providence, R. I. The process may be used for imparting non-shrinking and non-felting properties to wools and woolens, and is adaptable to wool-cotton mixtures. It utilizes an aqueous solution at a pH of 2.0 to 3.0, with the entire treatment completed at room temperature in approximately one hour without special equipment. It is claimed by the manufacturer that woolens treated with the Proton Process and felted for one hour show less than one per cent shrinkage, and are soft, lofty and whiter than the original wool. Tensile strength is not diminished and abrasion resistance, based on a Taber Abraser rating, is increased 80 to 100 per cent.

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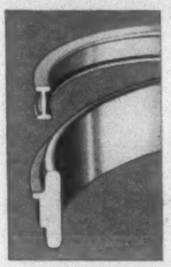

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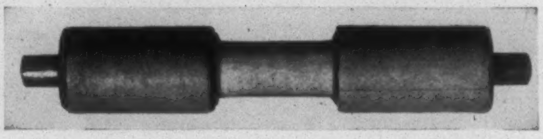

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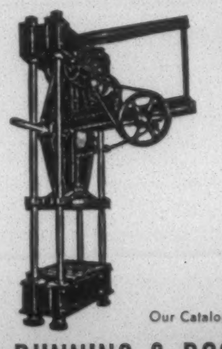

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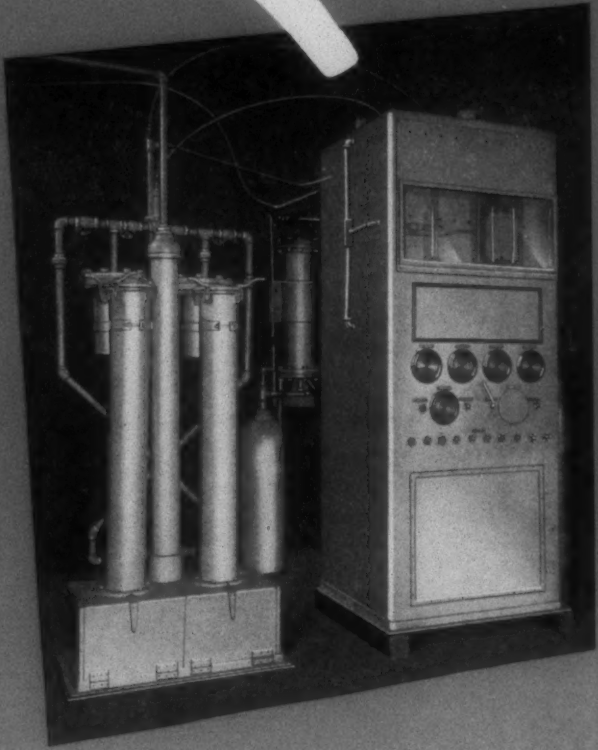

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